

047-E2F-PCT.ST25.txt  
SEQUENCE LISTING

<110> CropDesign N.V.

<120> Identification of novel E2F target genes and use thereof

<130> 4982-3

<140> 10/531,475

<141> 2005-04-15

<150> PCT/EP2003/011658

<151> 2003-10-20

<150> EP 02079408.7

<151> 2002-10-18

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<170> PatentIn version 3.1

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<212> DNA

<213> Arabidopsis thaliana

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<213> Arabidopsis thaliana

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Ser Phe Tyr Phe Gln Ser His Val Arg Lys Gln Gly Tyr Ile Gln Leu  
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Gly Tyr Phe Ser Gly Pro Trp Ile Ile Arg Ile Thr Phe Ile Leu Phe  
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Arg His Arg Arg Leu Leu Ser Gly Leu Asp Leu Arg Trp Gln Glu Asn  
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Val Cys Lys Trp Tyr Ile Val Ser Asn Leu Gly Phe Ala Glu Pro Cys  
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Leu Phe Leu Thr Leu Met Phe Leu Leu Arg Ala Pro Leu Lys Met Glu  
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His Asp Phe Thr Arg Thr Tyr Ser Arg Val Ile Ile Asp His Asp Glu  
180 185 190

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195 200 205

Phe Ala Ala Val Leu Thr Ala Tyr Leu Phe Trp Leu Gly Arg Gln Ile  
210 215 220

Leu Lys Leu Val Ile Asn Lys Arg Leu Gln Lys Arg Val Tyr Thr Leu  
225 230 235 240

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245 250 255

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Page 3

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<213> *Arabidopsis thaliana*

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<213> Oryza sativa

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35 40 45

Cys Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu Arg Pro Asp  
50 55 60

Leu Lys Arg Gly Asn Phe Thr Asp Asp Glu Asp Glu Leu Ile Ile Arg  
65 70 75 80

Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Gln Leu  
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Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile  
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Lys Arg Lys Leu Leu Ala Arg Gly Ile Asp Pro Gln Thr His Arg Pro  
115 120 125

Leu Leu Ser Gly Gly Asp Gly Ile Ala Ala Ser Asn Lys Arg His His  
130 135 140

Arg Arg Arg Ile Pro Tyr Pro Ser Arg Arg Arg Arg Pro Arg Arg  
 145 150 155 160

Ser Ser Pro Cys Glu Ala Ala Ala Ala Ala Ala Pro Gly Arg Leu Leu  
 165 170 175

Gly Arg Arg Leu Pro Gln Gln Gln Arg His Asn Glu His Gly Gly Ala  
 180 185 190

Ala Val Pro Arg Pro Gln Pro Arg Ala Leu Gly Arg Ala Asp Ala Glu  
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&lt;212&gt; PRT

&lt;213&gt; Oryza sativa

&lt;400&gt; 8

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Val Val His Tyr Leu Cys Arg Lys Val Ala Arg Gln Pro Leu Pro Val
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Pro Ile Ile Ala Glu Val Asp Leu Tyr Lys Leu Asp Pro Trp Asp Leu
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Lys Leu Asp Glu Trp Val Leu Cys Arg Leu Tyr Asn Lys Lys Asn Asn  
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Trp Glu Lys Val Lys Leu Glu Gln Gln Asp Val Ala Ser Val Ala Ala  
180 185 190

Ala Ala Pro Arg Asn His His His Gln Asn Gly Glu Val Met Asp Ala  
195 200 205

Ala Ala Ala Asp Thr Met Ser Asp Ser Phe Gln Thr His Asp Ser Asp  
210 215 220

Ile Asp Asn Ala Ser Ala Gly Leu Arg His Gly Gly Cys Gly Gly Gly  
225 230 235 240

Gly Phe Gly Asp Val Ala Pro Pro Arg Asn Gly Phe Val Thr Val Lys  
245 250 255

Glu Asp Asn Asp Trp Phe Thr Gly Leu Asn Phe Asp Glu Leu Gln Pro  
260 265 270

Pro Tyr Met Met Asn Leu Gln His Met Gln Met Gln Met Val Asn Pro  
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<213> *Oryza sativa*

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Gln Thr Lys Leu Glu Pro Arg Gln Lys Leu Gln Leu Ala Arg Glu Leu  
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Gly Leu Gln Pro Arg Gln Val Ala Ile Trp Phe Gln Asn Lys Arg Ala  
 65 70 75 80



Arg Trp Lys Ser Lys Gln Leu Glu Arg Glu Tyr Ser Ala Leu Arg Asp  
85 90 95

Asp Tyr Asp Ala Leu Leu Cys Ser Tyr Glu Ser Leu Lys Lys Glu Lys  
100 105 110

Leu Ala Leu Ile Lys Gln Leu Glu Lys Leu Ala Glu Met Leu Gln Glu  
115 120 125

Pro Arg Gly Lys Tyr Gly Asp Asn Ala Gly Asp Asp Ala Arg Ser Gly  
130 135 140

Gly Val Ala Gly Met Lys Lys Glu Glu Phe Val Gly Ala Gly Gly Ala  
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<212> DNA

<213> *Oryza sativa*

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<213> Oryza sativa

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Val Ser Ser Glu Thr Asp Glu Ser Gly Lys Gly Glu Val Ser Leu His  
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Thr Glu Leu Lys Ile Ser Pro Ala Asp Lys Ala Asp Thr Lys Pro Ala  
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Ala Gly Ala Glu Thr Ser Asp Val Phe Gly Asn Lys Lys Lys Gln Asp  
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Arg Ser Ser Cys Gly Ser Asn Thr Pro Ser Ser Ser Asp Ile Glu Ala  
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Ala Ser Cys Ser Asn Ser Ser Ala Gly Asp Asn Asn His Arg Arg Phe  
165 170 175

Arg Ser Ser Ala Ser Thr Ser Asp Ser Trp Lys Glu Val Ser Glu Glu  
180 185 190

Gly Arg Leu Ala Phe Asp Ala Leu Phe Ser Arg Glu Arg Leu Pro Gln  
195 200 205

Ser Phe Ser Pro Pro Gln Val Glu Gly Ser Lys Glu Ile Ser Lys Glu  
210 215 220

Glu Glu Asp Glu Val Thr Thr Val Thr Val Asp Leu Asn Lys Asn Ala  
225 230 235 240

Ala Ile Ile Asp Gln Glu Leu Asp Thr Ala Asp Glu Pro Arg Ala Ser  
245 250 255

Phe Pro Asn Glu Leu Ser Asn Leu Lys Leu Lys Ser Arg Arg Thr Gly  
260 265 270

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&lt;210&gt; 14

&lt;211&gt; 207

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 14

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Met Leu Ala Val His Arg Pro Ser Ser Ala Val Ser Asp Gly Asp Ser
1           5           10          15

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Val Gln Ile Pro Met Met Ile Ala Ser Phe Gln Lys Arg Phe Pro Ser
20          25          30

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Leu Ser Arg Asp Ser Thr Ala Ala Arg Phe His Thr His Glu Val Gly
35          40          45

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Pro Asn Gln Cys Cys Ser Ala Val Ile Gln Glu Ile Ser Ala Pro Ile
50          55          60

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047-E2F-PCT.ST25.txt

Ser Thr Val Trp Ser Val Val Arg Arg Phe Asp Asn Pro Gln Ala Tyr  
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Lys His Phe Leu Lys Ser Cys Ser Val Ile Gly Gly Asp Gly Asp Asn  
85 90 95  
Val Gly Ser Leu Arg Gln Val His Val Val Ser Gly Leu Pro Ala Ala  
100 105 110  
Ser Ser Thr Glu Arg Leu Asp Ile Leu Asp Asp Glu Arg His Val Ile  
115 120 125  
Ser Phe Ser Val Val Gly Gly Asp His Arg Leu Ser Asn Tyr Arg Ser  
130 135 140  
Val Thr Thr Leu His Pro Ser Pro Ile Ser Gly Thr Val Val Val Glu  
145 150 155 160  
Ser Tyr Val Val Asp Val Pro Pro Gly Asn Thr Lys Glu Glu Thr Cys  
165 170 175  
Asp Phe Val Asp Val Ile Val Arg Cys Asn Leu Gln Ser Leu Ala Lys  
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195 200 205

<210> 15

<211> 1848

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 16

&lt;211&gt; 380

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 16

Met Glu Glu Ile Glu Gly Thr Asn Arg Ala Ala Val Glu Ser Cys His  
 1 5 10 15

047-E2F-PCT.ST25.txt

Arg Val Leu Asn Leu Leu His Arg Ser Gln Gln Gln Asp His Val Gly  
20 25 30

Phe Glu Lys Asn Leu Val Ser Glu Thr Arg Glu Ala Val Ile Arg Phe  
35 40 45

Lys Arg Val Gly Ser Leu Leu Ser Ser Ser Val Gly His Ala Arg Phe  
50 55 60

Arg Arg Ala Lys Lys Leu Gln Ser His Val Ser Gln Ser Leu Leu Leu  
65 70 75 80

Asp Pro Cys Gln Gln Arg Thr Thr Glu Val Pro Ser Ser Ser Ser Gln  
85 90 95

Lys Thr Pro Val Leu Arg Ser Gly Phe Gln Glu Leu Ser Leu Arg Gln  
100 105 110

Pro Ser Asp Ser Leu Thr Leu Gly Thr Arg Ser Phe Ser Leu Asn Ser  
115 120 125

Asn Ala Lys Ala Pro Leu Leu Gln Leu Asn Gln Gln Thr Met Pro Pro  
130 135 140

Ser Asn Tyr Pro Thr Leu Phe Pro Val Gln Gln Gln Gln Gln Gln  
145 150 155 160

Gln Gln Gln Gln Gln Gln Glu Gln Gln Gln Gln Gln Gln Gln  
165 170 175

Gln Gln Phe His Glu Arg Leu Gln Ala His His Leu His Gln Gln Gln  
180 185 190

Gln Leu Gln Lys His Gln Ala Glu Leu Met Leu Arg Lys Cys Asn Gly  
195 200 205

Gly Ile Ser Leu Ser Phe Asp Asn Ser Ser Cys Thr Pro Thr Met Ser  
210 215 220

Ser Thr Arg Ser Phe Val Ser Ser Leu Ser Ile Asp Gly Ser Val Ala  
225 230 235 240

Asn Ile Glu Gly Lys Asn Ser Phe His Phe Gly Val Pro Ser Ser Thr  
245 250 255

Asp Gln Asn Ser Leu His Ser Lys Arg Lys Cys Pro Leu Lys Gly Asp

260

Glu His Gly Ser Leu Lys Cys Gly Ser Ser Ser Arg Cys His Cys Ala  
275 280

Lys Lys Arg Lys His Arg Val Arg Arg Ser Ile Arg Val Pro Ala Ile  
290 295 300

Ser Asn Lys Val Ala Asp Ile Pro Pro Asp Asp Tyr Ser Trp Arg Lys  
305 310 315 320

Tyr Gly Gln Lys Pro Ile Lys Gly Ser Pro Tyr Pro Arg Gly Tyr Tyr  
325 330 335

Lys Cys Ser Ser Met Arg Gly Cys Pro Ala Arg Lys His Val Glu Arg  
340 345 350

Cys Leu Glu Asp Pro Ala Met Leu Ile Val Thr Tyr Glu Ala Glu His  
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370 375 380

<210> 17

<211> 846

<212> DNA

<213> Arabidopsis thaliana

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gaagtggact tttttgtttc taatgattga ttttagtactg ataagtgata acgatgtata	180
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047-E2F-PCT.ST25.txt

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<210> 18

<211> 137

<212> PRT

<213> Arabidopsis thaliana

<400> 18

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Asn Lys Val	Ser Asp Glu Met Glu	Ser Glu Glu Asn Ala	Ile Lys Lys
20	25	30	

Lys Tyr Gly Gly Leu Leu Pro	Lys Lys Ile Pro Leu	Ile Ser Lys Asp
35	40	45

His Glu Arg Ala Phe Phe	Asp Ser Ala Asp Trp	Ala Leu Gly Lys Gln
50	55	60

Lys Gly Gln Lys Pro	Lys Gly Pro Leu Glu	Ala Leu Arg Pro Lys Leu
65	70	75

Gln Pro Thr Pro	Gln Gln Pro Arg Ala Arg Arg Met Ala Tyr Ser
85	90

Ser Gly Glu Thr Glu Asp Thr Glu	Ile Asp Asn Asn Glu Ala Pro Asp
100	105

Asp Gln Ala Cys Ala Ser Ala Val	Asp Ser Thr Asn Leu Lys Asp Asp
115	120

Gly Gly Ala Lys Asp Asn	Ile Lys Ser
130	135

<210> 19

<211> 1395

<212> DNA

<213> *Arabidopsis thaliana*

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acctcacggt tcccaaattc tactgagaaa caaacagagg aattgcgttt cgtgcgcatt    240
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&lt;210&gt; 20

&lt;211&gt; 366

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 20

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Met Ala Ala Ala Ser Leu His Thr Ser Ile Ser Pro Arg Ser Phe Leu
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Pro Leu Ser Lys Pro Ser Leu Lys Pro His Arg Ser Gln Ile Leu Leu
20     25     30
Arg Asn Lys Gln Arg Asn Cys Val Ser Cys Ala Leu Ile Arg Asp Glu
35     40     45
Ile Asp Leu Ile Pro Val Gln Ser Arg Asp Arg Thr Asp His Glu Glu
50     55     60
Gly Ser Val Val Val Met Ser Thr Glu Thr Ala Val Asp Gly Asn Glu
65     70     75     80
Ser Val Val Val Gly Phe Ser Ala Ala Thr Ser Glu Gly Gln Leu Ser
85     90     95
Leu Glu Gly Phe Pro Ser Ser Ser Ser Ser Gly Ala Asp Leu Gly Asp
100    105    110
Glu Lys Arg Arg Glu Asn Glu Glu Met Glu Lys Met Ile Asp Arg Thr
115    120    125
Ile Asn Ala Thr Ile Val Leu Ala Ala Gly Ser Tyr Ala Ile Thr Lys
130    135    140
Leu Leu Thr Ile Asp His Asp Tyr Trp His Gly Trp Thr Leu Phe Glu
145    150    155    160
Ile Leu Arg Tyr Ala Pro Gln His Asn Trp Ile Ala Tyr Glu Glu Ala
165    170    175
Leu Lys Gln Asn Pro Val Leu Ala Lys Met Val Ile Ser Gly Val Val
180    185    190
Tyr Ser Val Gly Asp Trp Ile Ala Gln Cys Tyr Glu Gly Lys Pro Leu
195    200    205
Phe Glu Ile Asp Arg Ala Arg Thr Leu Arg Ser Gly Leu Val Gly Phe
210    215    220
Thr Leu His Gly Ser Leu Ser His Phe Tyr Tyr Gln Phe Cys Glu Glu
225    230    235    240

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047-E2F-PCT.ST25.txt

Leu Phe Pro Phe Gln Asp Trp Trp Val Val Pro Val Lys Val Ala Phe  
245 250 255

Asp Gln Thr Val Trp Ser Ala Ile Trp Asn Ser Ile Tyr Phe Thr Val  
260 265 270

Leu Gly Phe Leu Arg Phe Glu Ser Pro Ile Ser Ile Phe Lys Glu Leu  
275 280 285

Lys Ala Thr Phe Leu Pro Met Leu Thr Ala Gly Trp Lys Leu Trp Pro  
290 295 300

Phe Ala His Leu Ile Thr Tyr Gly Leu Val Pro Val Glu Gln Arg Leu  
305 310 315 320

Leu Trp Val Asp Cys Val Glu Leu Ile Trp Val Thr Ile Leu Ser Thr  
325 330 335

Tyr Ser Asn Glu Lys Ser Glu Ala Arg Ile Ser Glu Ser Val Ile Glu  
340 345 350

Thr Ser Ser Ser Ser Thr Thr Thr Ile Asp Pro Ser Lys Glu  
355 360 365

<210> 21

<211> 1627

<212> DNA

<213> Arabidopsis thaliana

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047-E2F-PCT.ST25.txt

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<210> 22

<211> 419

<212> PRT

<213> Arabidopsis thaliana

<400> 22

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20 25 30

Ser Arg Ser His Leu Val Asn Pro Gly Ala Arg Gln Glu Ile Ile Pro  
35 40 45

Ala Ser Ser Phe Asn Leu Asn Thr Glu Leu Leu Glu Pro Trp Lys Pro  
Page 23

50

55

Val Ser Ser Phe Ser Gln Phe Val Glu Ile Asp Ser Ala Met Met Lys  
65 70 75 80

Pro Leu Leu Met Asp Val His Glu Thr Ala Pro Glu Ser Leu Ile Leu  
85 90 95

Ser Phe Gly Ile Ala Asp Lys Phe Ala Arg Gln Glu Lys Val Met Glu  
100 105 110

Phe Leu Leu Ser Gln Ser Glu Glu Phe Lys Glu Lys Gly Phe Asp Met  
115 120 125

Ser Leu Leu Asn Glu Leu Met Glu Phe Glu Ser Met Lys Ser Ser Ser  
130 135 140

Gln Leu Arg Pro Tyr Asp Thr Ser Ser Val Leu Tyr Leu Asn Gln Glu  
145 150 155 160

Leu Gly Lys Pro Val Leu Asp Leu Val Arg Asp Met Met Glu Asn Pro  
165 170 175

Glu Phe Ser Val Arg Ser Asn Gly His Val Leu Phe Ser Ser Ser Ser  
180 185 190

Asn Pro Glu Leu Asn Asp Leu Leu Ser Ile Ala Ser Glu Phe Asn Leu  
195 200 205

Ser Arg Asn Ser Thr Thr Lys Trp Arg Gln Leu Ser Pro Leu Ile Pro  
210 215 220

His Phe Gln Arg Phe Glu Ser Asp Val Phe Thr Pro Ala Lys Leu Lys  
225 230 235 240

Ala Val Thr Val Leu Ala Pro Leu Lys Ser Pro Glu Lys Ser Arg Leu  
245 250 255

Lys Ser Pro Arg Lys His Asn Thr Lys Arg Lys Ala Lys Glu Arg Asp  
260 265 270

Leu Tyr Lys Arg Asn His Leu His Ala Tyr Glu Ser Leu Leu Ser Leu  
275 280 285

Met Ile Gly Asn Asp His Arg His Lys His Thr Thr Val Leu Ser Leu  
290 295 300

047-E2F-PCT.ST25.txt

Gln Lys Ser Cys Gly Glu Leu Ser Glu Leu Leu Thr Gln Phe Ser Ile  
305 310 315 320

Thr Ala Ala Gly Thr Gly Ile Ala Val Leu Phe Ser Val Val Cys Ser  
325 330 335

Leu Ala Ser Arg Arg Val Pro Phe Cys Ala Asn Lys Phe Phe Asp Thr  
340 345 350

Gly Leu Gly Leu Ser Leu Val Ile Leu Ser Trp Ala Val Asn Arg Leu  
355 360 365

Arg Glu Val Ile Val His Val Asn Arg Lys Ala Asn Lys Pro Cys Ser  
370 375 380

Ser Leu Lys Asp Asp Glu Ile Ile Asn Ser Val Glu Arg Ser Met Lys  
385 390 395 400

Glu Val Tyr Tyr Arg Ala Ala Thr Val Ile Ala Val Phe Ala Leu Arg  
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Phe Ala Cys

<210> 23

<211> 1647

<212> DNA

<213> Arabidopsis thaliana

<400> 23

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&lt;210&gt; 24

&lt;211&gt; 479

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 24

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Met Ser Lys Thr Asn Met Lys Phe Cys Asn Ser Tyr Phe Leu Val Asp
1           5           10           15

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Pro Thr Lys Ala Ser Phe Leu Asp Leu Leu Leu Leu Phe Ser Ser
           20           25           30

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Asn Leu Thr Ser Ala Arg Phe Ile Asp Ser Pro Pro Asp Thr Leu Lys
           35           40           45

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Gly Phe Arg Arg Ser Phe Ala Ser Arg Trp Ile Leu Ala Leu Ala Ile
           50           55           60

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047-E2F-PCT.ST25.txt

Phe Leu Gln Lys Val Leu Met Leu Leu Ser Lys Pro Phe Ala Phe Ile  
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 Gly Gln Lys Leu Thr Tyr Trp Leu Asn Leu Leu Thr Ala Asn Gly Gly  
 85 90 95  
 Phe Phe Asn Leu Ile Leu Asn Leu Met Ser Gly Lys Leu Val Lys Pro  
 100 105 110  
 Asp Lys Ser Ser Ala Thr Tyr Thr Ser Phe Ile Gly Cys Ser Asp Arg  
 115 120 125  
 Arg Ile Glu Leu Asp Glu Lys Ile Asn Val Gly Ser Ile Glu Tyr Lys  
 130 135 140  
 Ser Met Leu Ser Ile Met Ala Ser Lys Ile Ser Tyr Glu Ser Lys Pro  
 145 150 155 160  
 Tyr Ile Thr Ser Val Val Lys Asn Thr Trp Lys Met Asp Leu Val Gly  
 165 170 175  
 Asn Tyr Asp Phe Tyr Asn Ala Phe Gln Glu Ser Lys Leu Thr Gln Ala  
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 Phe Val Phe Lys Thr Ser Ser Thr Asn Pro Asp Leu Ile Val Val Ser  
 195 200 205  
 Phe Arg Gly Thr Glu Pro Phe Glu Ala Ala Asp Trp Cys Thr Asp Leu  
 210 215 220  
 Asp Leu Ser Trp Tyr Glu Met Lys Asn Val Gly Lys Val His Ala Gly  
 225 230 235 240  
 Phe Ser Arg Ala Leu Gly Leu Gln Lys Asp Gly Trp Pro Lys Glu Asn  
 245 250 255  
 Ile Ser Leu Leu His Gln Tyr Ala Tyr Tyr Thr Ile Arg Gln Met Leu  
 260 265 270  
 Arg Asp Lys Leu Gly Arg Asn Lys Asn Leu Lys Tyr Ile Leu Thr Gly  
 275 280 285  
 His Ser Leu Gly Gly Ala Leu Ala Ala Leu Phe Pro Ala Ile Leu Ala  
 290 295 300  
 Ile His Gly Glu Asp Glu Leu Leu Asp Lys Leu Glu Gly Ile Tyr Thr

## 047-E2F-PCT.ST25.txt

305 310 315 320

Phe Gly Gln Pro Arg Val Gly Asp Glu Asp Phe Gly Glu Phe Met Lys  
325 330 335

Gly Val Val Lys Lys His Gly Ile Glu Tyr Glu Arg Phe Val Tyr Asn  
340 345 350

Asn Asp Val Val Pro Arg Val Pro Phe Asp Asp Lys Tyr Leu Phe Ser  
355 360 365

Tyr Lys His Tyr Gly Pro Cys Asn Ser Phe Asn Ser Leu Tyr Lys Gly  
370 375 380

Lys Val Arg Glu Asp Ala Pro Asn Ala Asn Tyr Phe Asn Leu Leu Trp  
385 390 395 400

Leu Ile Pro Gln Leu Leu Thr Gly Leu Trp Glu Phe Ile Arg Ser Phe  
405 410 415

Ile Leu Gln Phe Trp Lys Gly Asp Glu Tyr Lys Glu Asn Trp Leu Met  
420 425 430

Arg Phe Val Arg Val Val Gly Ile Val Phe Pro Gly Gly Ser Asn His  
435 440 445

Phe Pro Phe Asp Tyr Val Asn Ser Thr Arg Leu Gly Gly Leu Val Arg  
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Pro Pro Pro Thr Thr Thr Pro Glu Asp Lys Leu Ala Leu Ile Ala  
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<211> 918

<212> DNA

<213> Arabidopsis thaliana

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acaaaggtag ctgtttccgg tgttatcaca gctggatttg agctgaagcc acctccatat 180  
cctcttgatg cctctggaacc gcatatgagc cgggaaacct tggattatca ctggggcaaa 240  
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047-E2F-PCT.ST25.txt

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acaaggttgg aatccgcaat tgctcgagca gtgcaaagag aacaagaagg aacagagaca	840
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<210> 26

<211> 305

<212> PRT

<213> Arabidopsis thaliana

<400> 26

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20	25	30	

Arg Asn Gly	Lys Arg Arg Leu Gly Thr Lys Val	Ala Val Ser Gly Val
35	40	45

Ile Thr Ala Gly Phe Glu	Leu Lys Pro Pro Pro Tyr	Pro Leu Asp Ala
50	55	60

Leu Glu Pro His Met	Ser Arg Glu Thr Leu Asp Tyr His Trp Gly Lys
65	70 75 80

His His Lys Thr Tyr Val Glu Asn Leu	Asn Lys Gln Ile Leu Gly Thr
85	90 95

Asp Leu Asp Ala	Leu Ser Leu Glu Glu Val Val Leu Leu Ser Tyr Asn
100	105 110

047-E2F-PCT.ST25.txt

Lys Gly Asn Met Leu Pro Ala Phe Asn Asn Ala Ala Gln Ala Trp Asn  
115 120 125

His Glu Phe Phe Trp Glu Ser Ile Gln Pro Gly Gly Gly Lys Pro  
130 135 140

Thr Gly Glu Leu Leu Arg Leu Ile Glu Arg Asp Phe Gly Ser Phe Glu  
145 150 155 160

Glu Phe Leu Glu Arg Phe Lys Ser Ala Ala Ala Ser Asn Phe Gly Ser  
165 170 175

Gly Trp Thr Trp Leu Ala Tyr Lys Ala Asn Arg Leu Asp Val Ala Asn  
180 185 190

Ala Val Asn Pro Leu Pro Lys Glu Glu Asp Lys Lys Leu Val Ile Val  
195 200 205

Lys Thr Pro Asn Ala Val Asn Pro Leu Val Trp Asp Tyr Ser Pro Leu  
210 215 220

Leu Thr Ile Asp Thr Trp Glu His Ala Tyr Tyr Leu Asp Phe Glu Asn  
225 230 235 240

Arg Arg Ala Glu Tyr Ile Asn Thr Phe Met Glu Lys Leu Val Ser Trp  
245 250 255

Glu Thr Val Ser Thr Arg Leu Glu Ser Ala Ile Ala Arg Ala Val Gln  
260 265 270

Arg Glu Gln Glu Gly Thr Glu Thr Glu Asp Glu Glu Asn Pro Asp Asp  
275 280 285

Glu Val Pro Glu Val Tyr Leu Asp Ser Asp Ile Asp Val Ser Glu Val  
290 295 300

Asp  
305

<210> 27

<211> 1479

<212> DNA

<213> Arabidopsis thaliana

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gacaacatca agttcggttt tccgatggcg ttcacaaca cgaatgcttc atggagtata 300
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ggaacagatt acctccttaa agcgacggcg attcccgagg tagtcttctg ccaagtcgga 420
gacgcttact ccgatcataa ctgttgggaa aggcctgaag atatggacac tctccgtact 480
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ttagccgccg cttcaatcgt ttttagaaaa cgcgatcctg cttattccag acttctactt 600
gaccgtgcc ataggggtatt cgcgtttgct aacagatatc gggcgcgta tagtaacagt 660
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ccaaaccttt tggttgggtg tgtagtcggt ggacctaag tcactgatgc ttttccggat 1380
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<210> 28

<211> 492

<212> PRT

<213> Arabidopsis thaliana

<400> 28

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Leu Phe Ser Pro Pro Ile Tyr Ser Ala Gly His Asp Tyr Arg Asp Ala  
20 25 30

Leu Arg Lys Ser Ile Leu Phe Phe Glu Gly Gln Arg Ser Gly Lys Leu  
35 40 45

Pro Pro Asp Gln Arg Leu Lys Trp Arg Arg Asp Ser Ala Leu Arg Asp  
50 55 60

Gly Ser Ser Ala Gly Val Asp Leu Ser Gly Gly Tyr Tyr Asp Ala Gly  
65 70 75 80

Asp Asn Ile Lys Phe Gly Phe Pro Met Ala Phe Thr Thr Thr Met Leu  
85 90 95

Ser Trp Ser Ile Ile Asp Phe Gly Lys Thr Met Gly Pro Glu Leu Arg  
100 105 110

Asn Ala Val Lys Ala Val Lys Trp Gly Thr Asp Tyr Leu Leu Lys Ala  
115 120 125

Thr Ala Ile Pro Gly Val Val Phe Val Gln Val Gly Asp Ala Tyr Ser  
130 135 140

Asp His Asn Cys Trp Glu Arg Pro Glu Asp Met Asp Thr Leu Arg Thr  
145 150 155 160

Val Tyr Lys Ile Asp Arg Ala His Pro Gly Ser Asp Val Ala Gly Glu  
165 170 175

Thr Ala Ala Ala Leu Ala Ala Ala Ser Ile Val Phe Arg Lys Arg Asp  
180 185 190

Pro Ala Tyr Ser Arg Leu Leu Leu Asp Arg Ala Thr Arg Val Phe Ala  
195 200 205

Phe Ala Asn Arg Tyr Arg Gly Ala Tyr Ser Asn Ser Leu Tyr His Ala  
210 215 220

Val Cys Pro Phe Tyr Cys Asp Phe Asn Gly Tyr Gln Asp Glu Leu Leu  
225 230 235 240

Trp Gly Ala Ala Trp Leu His Lys Ala Ser Arg Lys Arg Ala Tyr Arg  
245 250 255

Glu Phe Ile Val Lys Asn Glu Val Ile Leu Lys Ala Gly Asp Thr Ile  
 260 265 270  
 Asn Glu Phe Gly Trp Asp Asn Lys His Ala Gly Ile Asn Val Leu Ile  
 275 280 285  
 Ser Lys Glu Val Leu Met Gly Lys Ala Glu Tyr Phe Glu Ser Phe Lys  
 290 295 300  
 Gln Asn Ala Asp Gly Phe Ile Cys Ser Ile Leu Pro Gly Ile Ser His  
 305 310 315  
 Pro Gln Val Gln Tyr Ser Arg Gly Gly Leu Leu Val Lys Thr Gly Gly  
 325 330 335  
 Ser Asn Met Gln His Val Thr Ser Leu Ser Phe Leu Leu Leu Ala Tyr  
 340 345 350  
 Ser Asn Tyr Leu Ser His Ala Lys Lys Val Val Pro Cys Gly Glu Leu  
 355 360 365  
 Thr Ala Ser Pro Ser Leu Leu Arg Gln Ile Ala Lys Arg Gln Val Asp  
 370 375 380  
 Tyr Ile Leu Gly Asp Asn Pro Met Gly Leu Ser Tyr Met Val Gly Tyr  
 385 390 395 400  
 Gly Gln Lys Phe Pro Arg Arg Ile His His Arg Gly Ser Ser Val Pro  
 405 410 415  
 Ser Val Ser Ala His Pro Ser His Ile Gly Cys Lys Glu Gly Ser Arg  
 420 425 430  
 Tyr Phe Leu Ser Pro Asn Pro Asn Pro Asn Leu Leu Val Gly Ala Val  
 435 440 445  
 Val Gly Gly Pro Asn Val Thr Asp Ala Phe Pro Asp Ser Arg Pro Tyr  
 450 455 460  
 Phe Gln Gln Ser Glu Pro Thr Thr Tyr Ile Asn Ala Pro Leu Val Gly  
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047-E2F-PCT.ST25.txt

<211> 1365

<212> DNA

<213> *Arabidopsis thaliana*

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acatacaaga	agtttgaagc	agagatttac	gtgctcacaa	aggatgaagg	tggagctcac	1140
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aaagtggaat	tacccgaaaa	cgtagaatgt	gttatgcctg	gtgacaatgt	cacagctgtt	1260
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<210> 30

<211> 454

<212> PRF



<213> *Arabidopsis thaliana*

&lt;400&gt; 30

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20 25 30Tyr Ser Ile Ser His Ser Ile Gly Gly Asp Asp Leu Ser Ser Ser Thr  
35 40 45Phe Gly Thr Ser Ser Phe Trp Arg Ser Met Ala Thr Phe Thr Arg Asn  
50 55 60Lys Pro His Val Asn Val Gly Thr Ile Gly His Val Asp His Gly Lys  
65 70 75 80Thr Thr Leu Thr Ala Ala Ile Thr Lys Val Leu Ala Glu Glu Gly Lys  
85 90 95Ala Lys Ala Ile Ala Phe Asp Glu Ile Asp Lys Ala Pro Glu Glu Lys  
100 105 110Lys Arg Gly Ile Thr Ile Ala Thr Ala His Val Glu Tyr Glu Thr Ala  
115 120 125Lys Arg His Tyr Ala His Val Asp Cys Pro Gly His Ala Asp Tyr Val  
130 135 140Lys Asn Met Ile Thr Gly Ala Ala Gln Met Asp Gly Gly Ile Leu Val  
145 150 155 160Val Ser Gly Pro Asp Gly Pro Met Pro Gln Thr Lys Glu His Ile Leu  
165 170 175Leu Ala Arg Gln Val Gly Val Pro Ser Leu Val Cys Phe Leu Asn Lys  
180 185 190Val Asp Val Val Asp Asp Pro Glu Leu Leu Glu Leu Val Glu Met Glu  
195 200 205Leu Arg Glu Leu Leu Ser Phe Tyr Lys Phe Pro Gly Asp Asp Ile Pro  
210 215 220Ile Ile Arg Gly Ser Ala Leu Ser Ala Leu Gln Gly Thr Asn Asp Glu  
Page 35

225 230 240

Ile Gly Arg Gln Ala Ile Leu Lys Leu Met Asp Ala Val Asp Glu Tyr  
245 250 255

Ile Pro Asp Pro Val Arg Val Leu Asp Lys Pro Phe Leu Met Pro Ile  
260 265 270

Glu Asp Val Phe Ser Ile Gln Gly Arg Gly Thr Val Ala Thr Gly Arg  
275 280 285

Ile Glu Gln Gly Val Ile Lys Val Gly Glu Glu Val Glu Ile Leu Gly  
290 295 300

Leu Arg Glu Gly Gly Val Pro Leu Lys Ser Thr Val Thr Gly Val Glu  
305 310 315 320

Met Phe Lys Lys Ile Leu Asp Asn Gly Gln Ala Gly Asp Asn Val Gly  
325 330 335

Leu Leu Leu Arg Gly Leu Lys Arg Glu Asp Ile Gln Arg Gly Met Val  
340 345 350

Ile Ala Lys Pro Gly Ser Cys Lys Thr Tyr Lys Lys Phe Glu Ala Glu  
355 360 365

Ile Tyr Val Leu Thr Lys Asp Glu Gly Gly Arg His Thr Ala Phe Phe  
370 375 380

Ser Asn Tyr Arg Pro Gln Phe Tyr Leu Arg Thr Ala Asp Ile Thr Gly  
385 390 395 400

Lys Val Glu Leu Pro Glu Asn Val Lys Met Val Met Pro Gly Asp Asn  
405 410 415

Val Thr Ala Val Phe Glu Leu Ile Met Pro Val Pro Leu Glu Thr Gly  
420 425 430

Gln Arg Phe Ala Leu Arg Glu Gly Gly Arg Thr Val Gly Ala Gly Val  
435 440 445

Val Ser Lys Val Met Thr  
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<210> 31

<211> 510

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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gaggctcagt cgagaggtag cggcgggtgg ggaggaggcc gtggtggaag cggtggtggt    300
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ggcgggtggtg gttacgagag acgtacgga ggttacggat ctggtggagg cggtggtggc    420
cgaggatacg gtggtggtgg acgccgtgag ggaggtggct acggaggcgg tgatggtgga    480
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&lt;210&gt; 32

&lt;211&gt; 169

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 32

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20     25     30
Ile Asp Ser Lys Ile Ile Asn Asp Arg Glu Ser Gly Arg Ser Arg Gly
35     40     45
Phe Gly Phe Val Thr Phe Lys Asp Glu Lys Ala Met Arg Asp Ala Ile
50     55     60
Glu Glu Met Asn Gly Lys Glu Leu Asp Gly Arg Val Ile Thr Val Asn
65     70     75     80
Glu Ala Gln Ser Arg Gly Ser Gly Gly Gly Gly Gly Arg Gly Gly
85     90     95
Ser Gly Gly Gly Tyr Arg Ser Gly Gly Gly Gly Tyr Ser Gly Gly

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Gly Gly Gly Gly Tyr Ser Gly Gly Gly Gly Gly Tyr Glu Arg Arg  
 115 120 125

Ser Gly Gly Tyr Gly Ser Gly Gly Gly Gly Gly Arg Gly Tyr Gly  
 130 135 140

Gly Gly Gly Arg Arg Glu Gly Gly Tyr Gly Gly Asp Gly Gly  
 145 150 155 160

Ser Tyr Gly Gly Gly Gly Gly Trp  
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<211> 1446

<212> DNA

<213> Arabidopsis thaliana

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 gccgatggaa ttttggtaaa tacatgggaa gagatggagc ccaaatcatt gaagtccctt 660  
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agagactcgg cggagatgtc actgagcatt gacggtggtg gtttggcgca cgagtcgctt	1380
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<210> 34

<211> 481

<212> PRT

<213> Arabidopsis thaliana

<400> 34

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Gly His Val Ile	Pro	Val	Ile	Glu	Leu	Gly	Lys	Arg	Leu	Ser	Ala	Asn
20					25					30		

Asn Gly Phe His	Val	Thr	Val	Phe	Val	Leu	Glu	Thr	Asp	Ala	Ala	Ser
35				40					45			

Ala Gln Ser Lys	Phe	Leu	Asn	Ser	Thr	Gly	Val	Asp	Ile	Val	Lys	Leu
50			55					60				

Pro Ser Pro Asp	Ile	Tyr	Gly	Leu	Val	Asp	Pro	Asp	Asp	His	Val	Val
65		70					75				80	

Thr Lys Ile Gly	Val	Ile	Met	Arg	Ala	Ala	Val	Pro	Ala	Leu	Arg	Ser
	85					90					95	

Lys Ile Ala Ala	Met	His	Gln	Lys	Pro	Thr	Ala	Leu	Ile	Val	Asp	Leu
	100				105					110		

Phe Gly Thr Asp	Ala	Leu	Cys	Leu	Ala	Lys	Glu	Phe	Asn	Met	Leu	Ser
	115			120					125			

Tyr Val Phe Ile	Pro	Thr	Asn	Ala	Arg	Phe	Leu	Gly	Val	Ser	Ile	Tyr

130

135

140

Tyr Pro Asn Leu Asp Lys Asp Ile Lys Glu Glu His Thr Val Gln Arg  
 145 150 155 160  
 Asn Pro Leu Ala Ile Pro Gly Cys Glu Pro Val Arg Phe Glu Asp Thr  
 165 170 175  
 Leu Asp Ala Tyr Leu Val Pro Asp Glu Pro Val Tyr Arg Asp Phe Val  
 180 185 190  
 Arg His Gly Leu Ala Tyr Pro Lys Ala Asp Gly Ile Leu Val Asn Thr  
 195 200 205  
 Trp Glu Glu Met Glu Pro Lys Ser Leu Lys Ser Leu Leu Asn Pro Lys  
 210 215 220  
 Leu Leu Gly Arg Val Ala Arg Val Pro Val Tyr Pro Ile Gly Pro Leu  
 225 230 235 240  
 Cys Arg Pro Ile Gln Ser Ser Glu Thr Asp His Pro Val Leu Asp Trp  
 245 250 255  
 Leu Asn Glu Gln Pro Asn Glu Ser Val Leu Tyr Ile Ser Phe Gly Ser  
 260 265 270  
 Gly Gly Cys Leu Ser Ala Lys Gln Leu Thr Glu Leu Ala Trp Gly Leu  
 275 280 285  
 Glu Gln Ser Gln Gln Arg Phe Val Trp Val Val Arg Pro Pro Val Asp  
 290 295 300  
 Gly Ser Cys Cys Ser Glu Tyr Val Ser Ala Asn Gly Gly Gly Thr Glu  
 305 310 315 320  
 Asp Asn Thr Pro Glu Tyr Leu Pro Glu Gly Phe Val Ser Arg Thr Ser  
 325 330 335  
 Asp Arg Gly Phe Val Val Pro Ser Trp Ala Pro Gln Ala Glu Ile Leu  
 340 345 350  
 Ser His Arg Ala Val Gly Gly Phe Leu Thr His Cys Gly Trp Ser Ser  
 355 360 365  
 Thr Leu Glu Ser Val Val Gly Gly Val Pro Met Ile Ala Trp Pro Leu  
 370 375 380

047-E2F-PCT.ST25.txt

Phe Ala Glu Gln Asn Met Asn Ala Ala Leu Leu Ser Asp Glu Leu Gly  
385 390 395 400

Ile Ala Val Arg Leu Asp Asp Pro Lys Glu Asp Ile Ser Arg Trp Lys  
405 410 415

Ile Glu Ala Leu Val Arg Lys Val Met Thr Glu Lys Glu Gly Glu Ala  
420 425 430

Met Arg Arg Lys Val Lys Lys Leu Arg Asp Ser Ala Glu Met Ser Leu  
435 440 445

Ser Ile Asp Gly Gly Gly Leu Ala His Glu Ser Leu Cys Arg Val Thr  
450 455 460

Lys Glu Cys Gln Arg Phe Leu Glu Arg Val Val Asp Leu Ser Arg Gly  
465 470 475 480

Ala

<210> 35

<211> 351

<212> DNA

<213> Arabidopsis thaliana

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gtgcaggag gagccattcc gtatagctgt tgcaatggca tcaggatgct cagcaaacag 180  
gcaactagcg catcagacaa acaaggtgtg tgtcgtgca tcaagtctgt ggtgggaaga 240  
gtgtcttact cgtaactcta tctcaagaaa gctgctgctt tgccaggcaa gtgcggtgtc 300  
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<210> 36

<211> 116

<212> PRT

<213> Arabidopsis thaliana

<400> 36

047-E2F-PCT.ST25.txt

Met Met Arg Val Val Leu Pro Leu Cys Leu Leu Leu Ala Ser Ile Phe  
1 5 10 15

Ala Trp Gly Ser Glu Ala Ala Ile Ser Cys Asn Ala Val Gln Ala Asn  
20 25 30

Leu Tyr Pro Cys Val Val Tyr Val Val Gln Gly Gly Ala Ile Pro Tyr  
35 40 45

Ser Cys Cys Asn Gly Ile Arg Met Leu Ser Lys Gln Ala Thr Ser Ala  
50 55 60

Ser Asp Lys Gln Gly Val Cys Arg Cys Ile Lys Ser Val Val Gly Arg  
65 70 75 80

Val Ser Tyr Ser Ser Ile Tyr Leu Lys Lys Ala Ala Ala Leu Pro Gly  
85 90 95

Lys Cys Gly Val Lys Leu Pro Tyr Lys Ile Asp Pro Ser Thr Asn Cys  
100 105 110

Asn Ser Ile Lys  
115

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<211> 324

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<213> Arabidopsis thaliana

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gtcccaatct cttctctgac acatcctgag ttccaatctc tcttacaacg agccgaggaa 240  
gaatttggat tcgatcacga catgggtctc accattcctt gtgatgaact cgtttttcaa 300  
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<210> 38

<211> 107

<212> PRT



<213> *Arabidopsis thaliana*

&lt;400&gt; 38

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20 25 30Gly Tyr Asp Glu Asp Cys Leu Pro Leu Asp Val Pro Lys Gly His Phe  
35 40 45Pro Val Tyr Val Gly Glu Asn Arg Ser Arg Tyr Ile Val Pro Ile Ser  
50 55 60Phe Leu Thr His Pro Glu Phe Gln Ser Leu Leu Gln Arg Ala Glu Glu  
65 70 75 80Glu Phe Gly Phe Asp His Asp Met Gly Leu Thr Ile Pro Cys Asp Glu  
85 90 95Leu Val Phe Gln Thr Leu Thr Ser Met Ile Arg  
100 105

&lt;210&gt; 39

&lt;211&gt; 825

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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	gttaagggaag tgaaggagaa gaagactgtt gctgccgctc cgaagaagag aactgtttca	180
	tctatccta cttacgaaga gatgattaag gatgcgattg ttacgttgaa agagagaact	240
	ggatctagcc aatacgcgat tcagaagtgc atcgaggaga agcgtaaagg gcttcctcca	300
	acattcagaa agctgttgct tctcaatctg aagagactcg ttgcttctgg gaagcttggtg	360
	aagggtcaaag cctcgtttaa actcccatcg gcgtcggcta aagcatcatc ccctaaggcg	420
	gcagcggaga aatctgtccc tgcgaagaag aaaccggcga ctgtggcggt taccaaggcg	480
	aagagaaagg tcgctgcggc ttccaaggct aagaaaaaaa tcgccgttaa acctaagact	540

gctgctgcta agaaagtac cgcaaggct aaggctaagc ccgttcctcg tgccactgct 600  
 gctgcaacta agaggaaagc tgttgatgcg aagcccaagg ctaaggctag accagccaag 660  
 gcagccaaaa cgccaaggt tacatctccg gctaagaaag ctgttgctgc cacgaagaaa 720  
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<210> 40

<211> 274

<212> PRT

<213> Arabidopsis thaliana

<400> 40

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 20 25 30

Ala Lys Gly Arg Lys Thr Lys Asn Val Lys Glu Val Lys Glu Lys Lys  
 35 40 45

Thr Val Ala Ala Ala Pro Lys Lys Arg Thr Val Ser Ser His Pro Thr  
 50 55 60

Tyr Glu Glu Met Ile Lys Asp Ala Ile Val Thr Leu Lys Glu Arg Thr  
 65 70 75 80

Gly Ser Ser Gln Tyr Ala Ile Gln Lys Phe Ile Glu Glu Lys Arg Lys  
 85 90 95

Glu Leu Pro Pro Thr Phe Arg Lys Leu Leu Leu Leu Asn Leu Lys Arg  
 100 105 110

Leu Val Ala Ser Gly Lys Leu Val Lys Val Lys Ala Ser Phe Lys Leu  
 115 120 125

Pro Ser Ala Ser Ala Lys Ala Ser Ser Pro Lys Ala Ala Ala Glu Lys  
 130 135 140

Ser Ala Pro Ala Lys Lys Lys Pro Ala Thr Val Ala Val Thr Lys Ala  
 145 150 155 160

# 047-E2F-PCT.ST25.txt

Lys Arg Lys Val Ala Ala Ala Ser Lys Ala Lys Lys Thr Ile Ala Val  
165 170 175

Lys Pro Lys Thr Ala Ala Ala Lys Lys Val Thr Ala Lys Ala Lys Ala  
180 185 190

Lys Pro Val Pro Arg Ala Thr Ala Ala Ala Thr Lys Arg Lys Ala Val  
195 200 205

Asp Ala Lys Pro Lys Ala Lys Ala Arg Pro Ala Lys Ala Ala Lys Thr  
210 215 220

Ala Lys Val Thr Ser Pro Ala Lys Lys Ala Val Ala Ala Thr Lys Lys  
225 230 235 240

Val Ala Thr Val Ala Thr Lys Lys Lys Thr Pro Val Lys Lys Val Val  
245 250 255

Lys Pro Lys Thr Val Lys Ser Pro Ala Lys Arg Ala Ser Ser Arg Val  
260 265 270

Lys Lys

<210> 41

<211> 1299

<212> DNA

<213> Arabidopsis thaliana

<400> 41

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accggaagat	gggaattcta	tatttgggac	tggtgggaac	aagtttactt	aggtggattt	480
gacactgtc	atgcagcagc	tcgagcatat	gatagagctg	ctattaaatt	ccgtggagta	540
gaagcggata	tcaatttcaa	catcgacgat	tatgatgatg	acttgaaaca	gatgactaat	600

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&lt;210&gt; 42

&lt;211&gt; 432

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 42

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Met Trp Asp Leu Asn Asp Ala Pro His Gln Thr Gln Arg Glu Glu Glu
1      5      10      15

```

```

Ser Glu Glu Phe Cys Tyr Ser Ser Pro Ser Lys Arg Val Gly Ser Phe
20      25      30

```

```

Ser Asn Ser Ser Ser Ser Ala Val Val Ile Glu Asp Gly Ser Asp Asp
35      40      45

```

```

Asp Glu Leu Asn Arg Val Arg Pro Asn Asn Pro Leu Val Thr His Gln
50      55      60

```

```

Phe Phe Pro Glu Met Asp Ser Asn Gly Gly Gly Val Ala Ser Gly Phe
65      70      75      80

```

```

Pro Arg Ala His Trp Phe Gly Val Lys Phe Cys Gln Ser Asp Leu Ala
85      90      95

```

```

Thr Gly Ser Ser Ala Gly Lys Ala Thr Asn Val Ala Ala Ala Val Val
100      105      110

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047-E2F-PCT.ST25.txt

Glu Pro Ala Gln Pro Leu Lys Lys Ser Arg Arg Gly Pro Arg Ser Arg  
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 Ser Ser Gln Tyr Arg Gly Val Thr Phe Tyr Arg Arg Thr Gly Arg Trp  
 130 135 140  
 Glu Ser His Ile Trp Asp Cys Gly Lys Gln Val Tyr Leu Gly Gly Phe  
 145 150 155 160  
 Asp Thr Ala His Ala Ala Ala Arg Ala Tyr Asp Arg Ala Ala Ile Lys  
 165 170 175  
 Phe Arg Gly Val Glu Ala Asp Ile Asn Phe Asn Ile Asp Asp Tyr Asp  
 180 185 190  
 Asp Asp Leu Lys Gln Met Thr Asn Leu Thr Lys Glu Glu Phe Val His  
 195 200 205  
 Val Leu Arg Arg Gln Ser Thr Gly Phe Pro Arg Gly Ser Ser Lys Tyr  
 210 215 220  
 Arg Gly Val Thr Leu His Lys Cys Gly Arg Trp Glu Ala Arg Met Gly  
 225 230 235 240  
 Gln Phe Leu Gly Lys Lys Tyr Val Tyr Leu Gly Leu Phe Asp Thr Glu  
 245 250 255  
 Val Glu Ala Ala Arg Ala Tyr Asp Lys Ala Ala Ile Lys Cys Asn Gly  
 260 265 270  
 Lys Asp Ala Val Thr Asn Phe Asp Pro Ser Ile Tyr Asp Glu Glu Leu  
 275 280 285  
 Asn Ala Glu Ser Ser Gly Asn Pro Thr Thr Pro Gln Asp His Asn Leu  
 290 295 300  
 Asp Leu Ser Leu Gly Asn Ser Ala Asn Ser Lys His Lys Ser Gln Asp  
 305 310 315 320  
 Met Arg Leu Arg Met Asn Gln Gln Gln Gln Asp Ser Leu His Ser Asn  
 325 330 335  
 Glu Val Leu Gly Leu Gly Gln Thr Gly Met Leu Asn His Thr Pro Asn  
 340 345 350  
 Ser Asn His Gln Phe Pro Gly Ser Ser Asn Ile Gly Ser Gly Gly Gly

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355 360 365

Leu Phe Pro Ala Ala Glu Asn His Arg Phe Asp Gly Arg Ala  
375 380

Asn Gln Val Leu Thr Asn Ala Ala Ser Ser Gly Phe Ser  
390 395 400

His His Asn Gln Ile Phe Asn Ser Thr Ser Thr Pro His Gln  
405 410 415

Leu Gln Thr Asn Gly Phe Gln Pro Pro Leu Met Arg Pro Ser  
420 425 430

<210> 43

<212> DNA

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gctgttctcg	agtacctcgc	cgccgaggtg ttggagctgg cgggaaacgc agcaagggat 240
aacaagaaga	cacgtatagt	accaagacac attcagcttg cagtggaggaa cgatgaagag 300
ttaagcaaac	ttctgggaag	tgtgacgatt gcgaatggag gagttttgcc aaatatccat 360
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gagttctga		429

&lt;211&gt; 142

<213> Arabidopsis thaliana

Met Ser Thr Gly Ala Gly Ser Gly Thr Thr Lys Gly Gly Arg Gly Lys  
1 5 10 15

Pro Lys Ala Thr Lys Ser Val Ser Arg Ser Ser Lys Ala Gly Leu Gln  
 20 25 30

Phe Pro Val Gly Arg Ile Ala Arg Phe Leu Lys Ser Gly Lys Tyr Ala  
 35 40 45

Glu Arg Val Gly Ala Gly Ala Pro Val Tyr Leu Ser Ala Val Leu Glu  
 50 55 60

Tyr Leu Ala Ala Glu Val Leu Glu Leu Ala Gly Asn Ala Ala Arg Asp  
 65 70 75 80

Asn Lys Lys Thr Arg Ile Val Pro Arg His Ile Gln Leu Ala Val Arg  
 85 90 95

Asn Asp Glu Glu Leu Ser Lys Leu Leu Gly Ser Val Thr Ile Ala Asn  
 100 105 110

Gly Gly Val Leu Pro Asn Ile His Gln Thr Leu Leu Pro Ser Lys Val  
 115 120 125

Gly Lys Asn Lys Gly Asp Ile Gly Ser Ala Ser Gln Glu Phe  
 130 135 140

<210> 45

<211> 1545

<212> DNA

<213> Arabidopsis thaliana

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 gacatcgggg ttccaggttg agtgatgtca atggggccat ttctaaaaag atttttccca 180  
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 cctctgtatc tctccgagat ggcgccggca aaatacagag gagcaatcag caatggtttc 540  
 cagctctgta tcggaattgg atttctatct gcaaatgtaa taaactacga aacccaaaat 600

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cacaagaccg agcttatgct tcgccgtgtc cgtggaacta acgacgttca agatgagctt    780
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&lt;210&gt; 46

&lt;211&gt; 514

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 46

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Met Val Ala Glu Glu Ala Arg Lys Glu Ala Met Ala Lys Ser Val Ser
1      5      10      15

```

```

Gly Gly Lys Ile Thr Tyr Phe Val Val Ala Ser Cys Val Met Ala Ala
20      25      30

```

```

Met Gly Gly Val Ile Phe Gly Tyr Asp Ile Gly Val Ser Gly Gly Val
35      40      45

```

```

Met Ser Met Gly Pro Phe Leu Lys Arg Phe Phe Pro Lys Val Tyr Lys
50      55      60

```

```

Leu Gln Glu Glu Asp Arg Arg Arg Arg Gly Asn Ser Asn Asn His Tyr
65      70      75      80

```



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Cys Leu Phe Asn Ser Gln Leu Leu Thr Ser Phe Thr Ser Ser Leu Tyr  
 85 90 95  
 Val Ser Gly Leu Ile Ala Thr Leu Leu Ala Ser Ser Val Thr Arg Ser  
 100 105 110  
 Trp Gly Arg Lys Pro Ser Ile Phe Leu Gly Gly Val Ser Phe Leu Ala  
 115 120 125  
 Gly Ala Ala Leu Gly Gly Ser Ala Gln Asn Val Ala Met Leu Ile Ile  
 130 135 140  
 Ala Arg Leu Leu Leu Gly Val Gly Val Gly Phe Ala Asn Gln Ser Val  
 145 150 155 160  
 Pro Leu Tyr Leu Ser Glu Met Ala Pro Ala Lys Tyr Arg Gly Ala Ile  
 165 170 175  
 Ser Asn Gly Phe Gln Leu Cys Ile Gly Ile Gly Phe Leu Ser Ala Asn  
 180 185 190  
 Val Ile Asn Tyr Glu Thr Gln Asn Ile Lys His Gly Trp Arg Ile Ser  
 195 200 205  
 Leu Ala Thr Ala Ala Ile Pro Ala Ser Ile Leu Thr Leu Gly Ser Leu  
 210 215 220  
 Phe Leu Pro Glu Thr Pro Asn Ser Ile Ile Gln Thr Thr Gly Asp Val  
 225 230 235 240  
 His Lys Thr Glu Leu Met Leu Arg Arg Val Arg Gly Thr Asn Asp Val  
 245 250 255  
 Gln Asp Glu Leu Thr Asp Leu Val Glu Ala Ser Ser Gly Ser Asp Thr  
 260 265 270  
 Asp Ser Asn Ala Phe Leu Lys Leu Leu Gln Arg Lys Tyr Arg Pro Glu  
 275 280 285  
 Leu Val Met Ala Leu Val Ile Pro Phe Phe Gln Gln Val Thr Gly Ile  
 290 295 300  
 Asn Val Val Ala Phe Tyr Ala Pro Val Leu Tyr Arg Thr Val Gly Phe  
 305 310 315 320  
 Gly Glu Ser Gly Ser Leu Met Ser Thr Leu Val Thr Gly Ile Val Gly

325

335

Thr Ser Ser Thr Leu Leu Ser Met Leu Val Val Asp Arg Ile Gly Arg  
340 345 350

Lys Thr Leu Phe Leu Ile Gly Gly Leu Gln Met Leu Val Ser Gln Val  
355 360 365

Thr Ile Gly Val Ile Val Met Val Ala Asp Val His Asp Gly Val Ile  
370 375 380

Lys Glu Gly Tyr Gly Tyr Ala Val Val Val Leu Val Cys Val Tyr Val  
385 390 395 400

Ala Gly Phe Gly Trp Ser Trp Gly Pro Leu Gly Trp Leu Val Pro Ser  
405 410 415

Glu Ile Phe Pro Leu Glu Ile Arg Ser Val Ala Gln Ser Val Thr Val  
420 425 430

Ala Val Ser Phe Val Phe Thr Phe Ala Val Ala Gln Ser Ala Pro Pro  
435 440 445

Met Leu Cys Lys Phe Arg Ala Gly Ile Phe Phe Phe Tyr Gly Gly Trp  
450 455 460

Leu Val Val Met Thr Val Ala Val Gln Leu Phe Leu Pro Glu Thr Lys  
465 470 475 480

Asn Val Pro Ile Glu Lys Val Val Gly Leu Trp Glu Lys His Trp Phe  
485 490 495

Trp Arg Arg Met Thr Ser Lys Arg Asp Ile Gln Glu Thr Thr Ile Leu  
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Ser His

<210> 47

<211> 2688

<212> DNA

<213> Arabidopsis thaliana

<400> 47

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## 047-E2F-PCT.ST25.txt

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<210> 48

<211> 895

<212> PRT

<213> *Arabidopsis thaliana*

<400> 48

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20 25 30

Thr Glu Lys Ile Leu Leu Asn Cys Gly Gly Gly Ala Ser Asn Leu Thr  
35 40 45

Asp Thr Asp Asn Arg Ile Trp Ile Ser Asp Val Lys Ser Lys Phe Leu  
50 55 60

Ser Ser Ser Ser Glu Asp Ser Lys Thr Ser Pro Ala Leu Thr Gln Asp  
65 70 75 80

Pro Ser Val Pro Glu Val Pro Tyr Met Thr Ala Arg Val Phe Arg Ser  
85 90 95

047-E2F-PCT.ST25.txt

Pro Phe Thr Tyr Thr Phe Pro Val Ala Ser Gly Arg Lys Phe Val Arg  
100 105 110

Leu Tyr Phe Tyr Pro Asn Ser Tyr Asp Gly Leu Asn Ala Thr Asn Ser  
115 120 125

Leu Phe Ser Val Ser Phe Gly Pro Tyr Thr Leu Leu Lys Asn Phe Ser  
130 135 140

Ala Ser Gln Thr Ala Glu Ala Leu Thr Tyr Ala Phe Ile Ile Lys Glu  
145 150 155 160

Phe Val Val Asn Val Glu Gly Gly Thr Leu Asn Met Thr Phe Thr Pro  
165 170 175

Glu Ser Ala Pro Ser Asn Ala Tyr Ala Phe Val Asn Gly Ile Glu Val  
180 185 190

Thr Ser Met Pro Asp Met Tyr Ser Ser Thr Asp Gly Thr Leu Thr Met  
195 200 205

Val Gly Ser Ser Gly Ser Val Thr Ile Asp Asn Ser Thr Ala Leu Glu  
210 215 220

Asn Val Tyr Arg Leu Asn Val Gly Gly Asn Asp Ile Ser Pro Ser Ala  
225 230 235 240

Asp Thr Gly Leu Tyr Arg Ser Trp Tyr Asp Asp Gln Pro Tyr Ile Phe  
245 250 255

Gly Ala Gly Leu Gly Ile Pro Glu Thr Ala Asp Pro Asn Met Thr Ile  
260 265 270

Lys Tyr Pro Thr Gly Thr Pro Thr Tyr Val Ala Pro Val Asp Val Tyr  
275 280 285

Ser Thr Ala Arg Ser Met Gly Pro Thr Ala Gln Ile Asn Leu Asn Tyr  
290 295 300

Asn Leu Thr Trp Ile Phe Ser Ile Asp Ser Gly Phe Thr Tyr Leu Val  
305 310 315 320

Arg Leu His Phe Cys Glu Val Ser Ser Asn Ile Thr Lys Ile Asn Gln  
325 330 335

Arg Val Phe Thr Ile Tyr Leu Asn Asn Gln Thr Ala Glu Pro Glu Ala  
340 345 350

047-E2F-PCT.ST25.txt

Asp Val Ile Ala Trp Thr Ser Ser Asn Gly Val Pro Phe His Lys Asp  
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 Ala Leu His Pro Asn Pro Val Asn Lys Pro Glu Tyr Tyr Asp Ser Leu  
 385 390 395 400  
 Leu Asn Gly Val Glu Ile Phe Lys Met Asn Thr Ser Asp Gly Asn Leu  
 405 410 415  
 Ala Gly Thr Asn Pro Ile Pro Gly Pro Gln Val Thr Ala Asp Pro Ser  
 420 425 430  
 Lys Val Leu Arg Pro Thr Thr Arg Lys Ser Lys Ser Asn Thr Ala Ile  
 435 440 445  
 Ile Ala Gly Ala Ala Ser Gly Ala Val Val Leu Ala Leu Ile Ile Gly  
 450 455 460  
 Phe Cys Val Phe Gly Ala Tyr Arg Arg Arg Lys Arg Gly Asp Tyr Gln  
 465 470 475 480  
 Pro Ala Ser Asp Ala Thr Ser Gly Trp Leu Pro Leu Ser Leu Tyr Gly  
 485 490 495  
 Asn Ser His Ser Ala Gly Ser Ala Lys Thr Asn Thr Thr Gly Ser Tyr  
 500 505 510  
 Ala Ser Ser Leu Pro Ser Asn Leu Cys Arg His Phe Ser Phe Ala Glu  
 515 520 525  
 Ile Lys Ala Ala Thr Lys Asn Phe Asp Glu Ser Arg Val Leu Gly Val  
 530 535 540  
 Gly Gly Phe Gly Lys Val Tyr Arg Gly Glu Ile Asp Gly Gly Thr Thr  
 545 550 555 560  
 Lys Val Ala Ile Lys Arg Gly Asn Pro Met Ser Glu Gln Gly Val His  
 565 570 575  
 Glu Phe Gln Thr Glu Ile Glu Met Leu Ser Lys Leu Arg His Arg His  
 580 585 590  
 Leu Val Ser Leu Ile Gly Tyr Cys Glu Glu Asn Cys Glu Met Ile Leu  
 595 600 605

047-E2F-PCT.ST25.txt

Val Tyr Asp Tyr Met Ala His Gly Thr Met Arg Glu His Leu Tyr Lys  
610 615 620

Thr Gln Asn Pro Ser Leu Pro Trp Lys Gln Arg Leu Glu Ile Cys Ile  
625 630 635 640

Gly Ala Ala Arg Gly Leu His Tyr Leu His Thr Gly Ala Lys His Thr  
645 650 655

Ile Ile His Arg Asp Val Lys Thr Thr Asn Ile Leu Leu Asp Glu Lys  
660 665 670

Trp Val Ala Lys Val Ser Asp Phe Gly Leu Ser Lys Thr Gly Pro Thr  
675 680 685

Leu Asp His Thr His Val Ser Thr Val Val Lys Gly Ser Phe Gly Tyr  
690 695 700

Leu Asp Pro Glu Tyr Phe Arg Arg Gln Gln Leu Thr Glu Lys Ser Asp  
705 710 715 720

Val Tyr Ser Phe Gly Val Val Leu Phe Glu Ala Leu Cys Ala Arg Pro  
725 730 735

Ala Leu Asn Pro Thr Leu Ala Lys Glu Gln Val Ser Leu Ala Glu Trp  
740 745 750

Ala Pro Tyr Cys Tyr Lys Lys Gly Met Leu Asp Gln Ile Val Asp Pro  
755 760 765

Tyr Leu Lys Gly Lys Ile Thr Pro Glu Cys Phe Lys Lys Phe Ala Glu  
770 775 780

Thr Ala Met Lys Cys Val Leu Asp Gln Gly Ile Glu Arg Pro Ser Met  
785 790 795 800

Gly Asp Val Leu Trp Asn Leu Glu Phe Ala Leu Gln Leu Gln Glu Ser  
805 810 815

Ala Glu Glu Asn Gly Lys Gly Val Cys Gly Asp Met Asp Met Asp Glu  
820 825 830

Ile Lys Tyr Asp Asp Gly Asn Cys Lys Gly Lys Asn Asp Lys Ser Ser  
835 840 845

Asp Val Tyr Glu Gly Asn Val Thr Asp Ser Arg Ser Ser Gly Ile Asp

850

855

860

Met Ser Ile Gly Gly Arg Ser Leu Ala Ser Glu Asp Ser Asp Gly Leu  
 865 870 875 880

Thr Pro Ser Ala Val Phe Ser Gln Ile Met Asn Pro Lys Gly Arg  
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&lt;210&gt; 49

&lt;211&gt; 2013

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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 caaccgcctg catttgcttc atggactgca atccagaaat ggaagacggg tgtgccttca 1140  
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<211> 670

<212> PRT

<213> *Arabidopsis thaliana*

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35 40 45

Phe Ser Ser Phe Tyr Pro Phe Ser Ser Ser Gln Ala Asn Gln His Thr  
50 55 60

Pro Asp Leu Asn Gln Ala Gln Tyr Pro Pro Gln His Gln Gln Pro Gln  
65 70 75 80

Asn Pro Pro Pro Val Tyr Gln Gln Gln Pro Pro Gln His Ala Ser Glu  
85 90 95

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Pro Ser Leu Val Thr Pro Leu Arg Ser Phe Arg Ser Pro Asp Val Ser  
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Asn Gly Asn Ala Glu Leu Glu Gly Ser Thr Val Lys Arg Arg Ile Pro  
115 120 125

Lys Lys Arg Pro Ile Ser Arg Pro Glu Asn Met Asn Phe Glu Ser Gly  
130 135 140

Ile Asn Val Ala Asp Arg Glu Asn Gly Asn Arg Glu Leu Val Leu Ser  
145 150 155 160

Val Leu Met Arg Phe Asp Ala Leu Arg Arg Arg Phe Ala Gln Leu Gly  
165 170 175

Asp Ala Lys Glu Ala Val Ser Gly Ile Ile Lys Arg Pro Asp Leu Lys  
180 185 190

Ser Gly Ser Thr Cys Met Gly Arg Gly Val Arg Thr Asn Thr Lys Lys  
195 200 205

Arg Pro Gly Ile Val Pro Gly Val Glu Ile Gly Asp Val Phe Phe Phe  
210 215 220

Arg Phe Glu Met Cys Leu Val Gly Leu His Ser Pro Ser Met Ala Gly  
225 230 235 240

Ile Asp Tyr Leu Val Val Lys Gly Glu Thr Glu Glu Glu Pro Ile Ala  
245 250 255

Thr Ser Ile Val Ser Ser Gly Tyr Tyr Asp Asn Asp Glu Gly Asn Pro  
260 265 270

Asp Val Leu Ile Tyr Thr Gly Gln Gly Gly Asn Ala Asp Lys Asp Lys  
275 280 285

Gln Ser Ser Asp Gln Lys Leu Glu Arg Gly Asn Leu Ala Leu Glu Lys  
290 295 300

Ser Leu Arg Arg Asp Ser Ala Val Arg Val Ile Arg Gly Leu Lys Glu  
305 310 315 320

Ala Ser His Asn Ala Lys Ile Tyr Ile Tyr Asp Gly Leu Tyr Glu Ile  
325 330 335

Lys Glu Ser Trp Val Glu Lys Gly Lys Ser Gly His Asn Thr Phe Lys  
340 345 350

047-E2F-PCT.ST25.txt

Tyr Lys Leu Val Arg Ala Pro Gly Gln Pro Pro Ala Phe Ala Ser Trp  
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 Ile Leu Pro Asp Met Thr Ser Gly Val Glu Ser Ile Pro Val Ser Leu  
 385 390 395 400  
 Val Asn Glu Val Asp Thr Asp Asn Gly Pro Ala Tyr Phe Thr Tyr Ser  
 405 410 415  
 Thr Thr Val Lys Tyr Ser Glu Ser Phe Lys Leu Met Gln Pro Ser Phe  
 420 425 430  
 Gly Cys Asp Cys Ala Asn Leu Cys Lys Pro Gly Asn Leu Asp Cys His  
 435 440 445  
 Cys Ile Arg Lys Asn Gly Gly Asp Phe Pro Tyr Thr Gly Asn Gly Ile  
 450 455 460  
 Leu Val Ser Arg Lys Pro Met Ile Tyr Glu Cys Ser Pro Ser Cys Pro  
 465 470 475 480  
 Cys Ser Thr Cys Lys Asn Lys Val Thr Gln Met Gly Val Lys Val Arg  
 485 490 495  
 Leu Glu Val Phe Lys Thr Ala Asn Arg Gly Trp Gly Leu Arg Ser Trp  
 500 505 510  
 Asp Ala Ile Arg Ala Gly Ser Phe Ile Cys Ile Tyr Val Gly Glu Ala  
 515 520 525  
 Lys Asp Lys Ser Lys Val Gln Gln Thr Met Ala Asn Asp Asp Tyr Thr  
 530 535 540  
 Phe Asp Thr Thr Asn Val Tyr Asn Pro Phe Lys Trp Asn Tyr Glu Pro  
 545 550 555 560  
 Gly Leu Ala Asp Glu Asp Ala Cys Glu Glu Met Ser Glu Glu Ser Glu  
 565 570 575  
 Ile Pro Leu Pro Leu Ile Ile Ser Ala Lys Asn Val Gly Asn Val Ala  
 580 585 590  
 Arg Phe Met Asn His Ser Cys Ser Pro Asn Val Phe Trp Gln Pro Val

595

600

605

Ser Tyr Glu Asn Asn Ser Gln Leu Phe Val His Val Ala Phe Phe Ala  
610 615 620

Ile Ser His Ile Pro Pro Met Thr Glu Leu Thr Tyr Asp Tyr Gly Val  
625 630 635 640

Ser Arg Pro Ser Gly Thr Gln Asn Gly Asn Pro Leu Tyr Gly Lys Arg  
645 650 655

Lys Cys Phe Cys Gly Ser Ala Tyr Cys Arg Gly Ser Phe Gly  
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&lt;211&gt; 936

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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gaaggatacg aggaagaaga agaagctata gtagaagaaa gaggacacgt gggcttgctg 180  
gagaagaaga gaaggttaag cattaaccaa gttaaagctt tggagaagaa ttttgagtta 240  
gagaataagc ttgagcctga gaggaaagtt aagttagctc aagaacttgg tcttcaacct 300  
cgtcaagttg ctgtttggtt tcaaaaccgt cgtgctcggt ggaagacaaa acagcttgag 360  
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ccacagtttc ttgaacattc tgatggtctt aattaccgga gtttcacaga tctacgtgat 660  
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ctacactggt actccaccgt tgatcattgg aattga 936

&lt;210&gt; 52

&lt;211&gt; 311

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 52

Met Met Lys Arg Leu Ser Ser Ser Asp Ser Val Gly Gly Leu Ile Ser  
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Leu Cys Pro Thr Thr Ser Thr Asp Glu Gln Ser Pro Arg Arg Tyr Gly  
 20 25 30

Gly Arg Glu Phe Gln Ser Met Leu Glu Gly Tyr Glu Glu Glu Glu Glu  
 35 40 45

Ala Ile Val Glu Glu Arg Gly His Val Gly Leu Ser Glu Lys Lys Arg  
 50 55 60

Arg Leu Ser Ile Asn Gln Val Lys Ala Leu Glu Lys Asn Phe Glu Leu  
 65 70 75 80

Glu Asn Lys Leu Glu Pro Glu Arg Lys Val Lys Leu Ala Gln Glu Leu  
 85 90 95

Gly Leu Gln Pro Arg Gln Val Ala Val Trp Phe Gln Asn Arg Arg Ala  
 100 105 110

Arg Trp Lys Thr Lys Gln Leu Glu Lys Asp Tyr Gly Val Leu Lys Thr  
 115 120 125

Gln Tyr Asp Ser Leu Arg His Asn Phe Asp Ser Leu Arg Arg Asp Asn  
 130 135 140

Glu Ser Leu Leu Gln Glu Ile Ser Lys Leu Lys Thr Lys Leu Asn Gly  
 145 150 155 160

Gly Gly Gly Glu Glu Glu Glu Glu Asn Asn Ala Ala Val Thr Thr  
 165 170 175

Glu Ser Asp Ile Ser Val Lys Glu Glu Glu Val Ser Leu Pro Glu Lys  
 180 185 190

Ile Thr Glu Ala Pro Ser Ser Pro Pro Gln Phe Leu Glu His Ser Asp  
 195 200 205

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Gly Leu Asn Tyr Arg Ser Phe Thr Asp Leu Arg Asp Leu Leu Pro Leu  
 210 215 220  
 Lys Ala Ala Ala Ser Ser Phe Ala Ala Ala Ala Gly Ser Ser Asp Ser  
 225 230 235  
 Ser Asp Ser Ser Ala Leu Leu Asn Glu Glu Ser Ser Ser Asn Val Thr  
 245 250 255  
 Val Ala Ala Pro Val Thr Val Pro Gly Gly Asn Phe Phe Gln Phe Val  
 260 265 270  
 Lys Met Glu Gln Thr Glu Asp His Glu Asp Phe Leu Ser Gly Glu Glu  
 275 280 285  
 Ala Cys Glu Phe Phe Ser Asp Glu Gln Pro Pro Ser Leu His Trp Tyr  
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 Ser Thr Val Asp His Trp Asn  
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<210> 53

<211> 1275

<212> DNA

<213> Arabidopsis thaliana

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 gctggaagg gtggggagtt gactcatgac gaaacgacaa tcattgcagg agctcttgaa 600  
 ctctctgaga aaatggtcaa agatgcaatg acaccaatat cggatatctt tgtgattgat 660  
 atcaatgcc aactagacag agacttgatg aacttgattc ttgagaaagg gcatagcaga 720

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agagtccag aaatcttgcc tttatatgac atattgaacg aattccagaa aggactcagc 900
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<211> 424

<212> PRT

<213> Arabidopsis thaliana

<400> 54

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Ala Val Ile Val Phe Leu Val Leu Phe Ala Gly Leu Met Ser Gly Leu  
20 25 30

Thr Leu Gly Leu Met Ser Leu Ser Leu Val Asp Leu Glu Val Leu Ala  
35 40 45

Lys Ser Gly Thr Pro Glu His Arg Lys Tyr Ala Ala Lys Ile Leu Pro  
50 55 60

Val Val Lys Asn Gln His Leu Leu Leu Val Thr Leu Leu Ile Cys Asn  
65 70 75 80

Ala Ala Ala Met Glu Thr Leu Pro Ile Phe Leu Asp Gly Leu Val Thr  
85 90 95

Ala Trp Gly Ala Ile Leu Ile Ser Val Thr Leu Ile Leu Leu Phe Gly  
100 105 110

Glu Ile Ile Pro Gln Ser Ile Cys Ser Arg Tyr Gly Leu Ala Ile Gly  
Page 65

115 120 047-E2F-PCT.ST25.txt 125

Ala Thr Val Ala Pro Phe Val Arg Val Leu Val Phe Ile Cys Leu Pro  
130 135 140

Val Ala Trp Pro Ile Ser Lys Leu Leu Asp Phe Leu Leu Gly His Arg  
145 150 155 160

Arg Ala Ala Leu Phe Arg Arg Ala Glu Leu Lys Thr Leu Val Asp Phe  
165 170 175

His Gly Asn Glu Ala Gly Lys Gly Gly Glu Leu Thr His Asp Glu Thr  
180 185 190

Thr Ile Ile Ala Gly Ala Leu Glu Leu Ser Glu Lys Met Val Lys Asp  
195 200 205

Ala Met Thr Pro Ile Ser Asp Ile Phe Val Ile Asp Ile Asn Ala Lys  
210 215 220

Leu Asp Arg Asp Leu Met Asn Leu Ile Leu Glu Lys Gly His Ser Arg  
225 230 235 240

Val Pro Val Tyr Tyr Glu Gln Pro Thr Asn Ile Ile Gly Leu Val Leu  
245 250 255

Val Lys Asn Leu Leu Thr Ile Asn Pro Asp Glu Glu Ile Pro Val Lys  
260 265 270

Asn Val Thr Ile Arg Arg Ile Pro Arg Val Pro Glu Ile Leu Pro Leu  
275 280 285

Tyr Asp Ile Leu Asn Glu Phe Gln Lys Gly Leu Ser His Met Ala Val  
290 295 300

Val Val Arg Gln Cys Asp Lys Ile His Pro Leu Pro Ser Lys Asn Gly  
305 310 315 320

Ser Val Lys Glu Ala Arg Val Asp Val Asp Ser Glu Gly Thr Pro Thr  
325 330 335

Pro Gln Glu Arg Met Leu Arg Thr Lys Arg Ser Leu Gln Lys Trp Lys  
340 345 350

Ser Phe Pro Asn Arg Ala Ser Ser Phe Lys Gly Gly Ser Lys Ser Lys  
355 360 365



Lys Trp Ser Lys Asp Asn Asp Ala Asp Ile Leu Gln Leu Asn Gly Asn  
 370 375 380

Pro Leu Pro Lys Leu Ala Glu Glu Glu Glu Ala Val Gly Ile Ile Thr  
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Thr Asp His His Phe Glu Asp Ser  
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<211> 1416

<212> DNA

<213> Arabidopsis thaliana

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 ctctgtgtct cttcttcac aatgtcccct ccgatttcac cttctccact ctctcttcct 180  
 tcttcttctt cttctcaggc cattctctct tctcgagcac ctgcagtgac tctaccgttg 240  
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&lt;210&gt; 60

&lt;211&gt; 310

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 60

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20           25           30

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Arg Ser Lys Arg Ser Gly Lys Phe Ser Gly Gly Tyr Ser Asp Ser Pro
Page 79

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35

40

45

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 65 70 75 80  
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 145 150 155 160  
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 Asp Arg Ala Glu Arg Glu Gly Phe Asn Pro Arg Ile Gln Ser Ser Arg  
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 Ser Ser Ser Arg Val Asn Gly Tyr Ser Arg Lys Asp Gly Ser Tyr Pro  
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 210 215 220  
 His Glu Gln Met Asn Ala Ala Ala Glu Val Glu Ser Asp Pro Ile Asp  
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 Glu Val Val Ser Ser Val Lys Met Leu Thr Glu Met Phe Val Arg Val  
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 Glu Met Glu Leu Lys His Cys Gln Met Met Leu Glu Ser Gln Gln Gln  
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<213> *Arabidopsis thaliana*

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<211> 1116

<212> PRT

<213> Arabidopsis thaliana

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35 40 45

Ala Lys Gln Ser Asn Pro Asp Thr Leu Ser Leu Lys Leu Ala His Leu  
50 55 60

Leu Gln Leu Ser Pro His Pro Glu Gly Arg Ala Met Ala Ala Val Leu  
65 70 75 80

Leu Arg Lys Leu Leu Thr Arg Asp Asp Ala Tyr Leu Trp Pro Arg Leu  
85 90 95

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100 105 110

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115 120 125

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145 150 155 160

Glu Ser Ala Phe Leu Ile Leu Ala Gln Leu Ser Gln Tyr Val Gly Glu  
165 170 175

Thr Leu Thr Pro His Ile Lys Glu Leu His Gly Val Phe Leu Gln Cys

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 210 215  
 Arg Phe Gln Asp Val Leu Pro Ala Met Ile Arg Thr Leu Thr Glu Ser  
 225 230 235 240  
 Leu Asn Asn Gly Asn Glu Ala Thr Ala Gln Glu Ala Leu Glu Leu  
 245 250 255  
 Ile Glu Leu Ala Gly Thr Glu Pro Arg Phe Leu Arg Arg Gln Leu Val  
 260 265 270  
 Asp Ile Val Gly Ser Met Leu Gln Ile Ala Glu Ala Asp Ser Leu Glu  
 275 280 285  
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 305 310 315 320  
 Asp Arg Leu Phe Ala Val Leu Met Lys Met Leu Glu Asp Ile Glu Asp  
 325 330 335  
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 370 375 380  
 Ala Tyr Leu Ala Ala Ser Glu Trp Gln Lys His His Ala Ser Leu Ile  
 385 390 395 400  
 Ala Leu Ala Gln Ile Ala Glu Gly Cys Ser Lys Val Met Ile Lys Asn  
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Pro Arg Val Arg Trp Ala Ala Ile Asn Ala Ile Gly Gln Leu Ser Thr  
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Asp Leu Gly Pro Asp Leu Gln Asn Gln His His Glu Arg Val Leu Pro  
450 455 460

Ala Leu Ala Ala Ala Met Asp Asp Phe Gln Asn Pro Arg Val Gln Ala  
465 470 475 480

His Ala Ala Ser Ala Val Leu Asn Phe Ser Glu Asn Cys Thr Pro Glu  
485 490 495

Ile Leu Ser Pro Tyr Leu Asp Gly Val Val Ser Lys Leu Leu Val Leu  
500 505 510

Leu Gln Asn Gly Lys Gln Met Val Gln Glu Gly Ala Leu Thr Ala Leu  
515 520 525

Ala Ser Val Ala Asp Ser Ser Gln Glu His Phe Gln Lys Tyr Tyr Asp  
530 535 540

Thr Val Met Pro Tyr Leu Lys Thr Ile Leu Met Asn Ala Thr Asp Lys  
545 550 555 560

Ser Lys Arg Met Leu Arg Ala Lys Ser Met Glu Cys Ile Ser Leu Val  
565 570 575

Gly Met Ala Val Gly Lys Asp Arg Phe Lys Glu Asp Ala Arg Gln Val  
580 585 590

Met Glu Val Leu Met Ser Leu Gln Gly Ser Gln Met Glu Ala Asp Asp  
595 600 605

Pro Ile Thr Ser Tyr Met Leu Gln Ala Trp Ala Arg Leu Cys Lys Cys  
610 615 620

Leu Gly Gln Asp Phe Leu Pro Tyr Met Lys Val Val Met Pro Pro Leu  
625 630 635 640

Leu Gln Ser Ala Gln Leu Lys Pro Asp Val Thr Ile Thr Ser Ala Asp  
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 740 745 750  
 Glu Ser Gln Gly Arg Asp Leu Ser Tyr Leu Lys Gln Leu Ser Asp Tyr  
 755 760 765  
 Ile Ile Pro Ala Met Leu Glu Ala Leu His Lys Glu Pro Asp Thr Glu  
 770 775 780  
 Ile Cys Val Ser Met Leu Glu Ala Ile Asn Glu Cys Leu Gln Ile Ser  
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 Lys Gln Val Met Thr Ala Ser Ser Ser Arg Lys Arg Glu Arg Gly Glu  
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 Glu Glu Asn Glu Gln Glu Glu Glu Ile Phe Asp Gln Val Gly Glu Ile  
 850 855 860  
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 865 870 875 880  
 Asp Glu Leu Ser Ser Tyr Leu Thr Pro Met Trp Gly Arg Asp Lys Thr  
 885 890 895  
 Ala Glu Glu Arg Arg Ile Ala Ile Cys Ile Phe Asp Asp Val Ala Glu  
 900 905 910  
 Gln Cys Arg Glu Ala Ala Phe Lys Tyr Tyr Asp Thr Tyr Leu Pro Phe  
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 Val Leu Glu Ala Cys Asn Asp Glu Ser Pro Glu Val Arg Gln Ala Ala  
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Val Tyr Gly Leu Gly Val Cys Ala Glu Phe Gly Gly Ser Val Phe Lys  
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Pro Leu Ile Gly Glu Ala Leu Ser Arg Leu Asn Val Val Ile Gln Leu  
 965 970 975

Pro Asn Ala Arg Gln Ser Glu Asn Ala Met Ala Tyr Asp Asn Ala Val  
 980 985 990

Ser Ala Val Gly Lys Ile Cys Gln Phe His Arg Asp Ser Ile Asp Ser  
 995 1000 1005

Ser Gln Val Leu Pro Ala Trp Leu Asn Cys Leu Pro Ile Ser Asn  
 1010 1015 1020

Asp Val Leu Glu Ala Lys Val Val His Asp Gln Leu Cys Ser Met  
 1025 1030 1035

Val Glu Arg Gln Asp Val Asp Leu Leu Gly Pro Asn Asn Gln His  
 1040 1045 1050

Leu Pro Lys Ile Leu Ile Val Phe Ala Glu Val Leu Thr Gly Lys  
 1055 1060 1065

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 1070 1075 1080

Arg Gln Leu Gln Gln Thr Leu Pro Pro Ser Ala Leu Ala Ser Thr  
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<213> Arabidopsis thaliana

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&lt;211&gt; 203

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 64

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Cys Val Gly Ser Asp Asp Ala Gln Glu Ser Asp Gly Asp Asp Ser Gly
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Tyr Ile His Gln Thr Val Ile Glu Glu Ser Lys Asp Lys Ala Ile Ser
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Glu Pro Ile Pro Glu Ser Leu Pro Leu Asn Ser Leu Asp Asp Glu Ser
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Glu Asp Lys Asn Leu Ala Thr Ala Leu Gln Asp Met Phe Ser Glu Ser
85      90

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Met Ser Val Val Thr Leu Ile Pro Ala Ile Lys Gly Gly Arg Glu Lys
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His Gly Lys Ser Leu Glu Lys Leu Ser Val Ser Trp Ala Glu Asp Val
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Tyr Asp Pro Pro Pro Ser Ile Val Ser His Thr Arg Ser Lys Lys Gln  
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Gln Pro Gln Lys Ser Lys Ser Lys Asp Asn Leu Lys Lys Asn Gly Lys  
145 150 155 160

Lys Gly Gln Lys Gly Ser Ser Asn Ser Arg Ser Ser Lys Asp Lys Lys  
165 170 175

Gln Ile Ser Ser Arg Ser Ser Lys Tyr Ser Arg Asp Lys Phe Asp Trp  
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Thr Thr Gln Met Ser Val Leu Ala Ala Ser Ser  
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<213> Arabidopsis thaliana

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&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 66

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50 55 60Gln Leu Pro Asp Val Glu Ser Glu Thr Asp Ser Glu Gly Ser Asp Val  
65 70 75 80Ser Gly Ser Glu Gly Asp Asp Thr Ser Trp Ile Ser Trp Phe Cys Asn  
85 90 95Leu Arg Gly Asn Asp Phe Phe Cys Glu Val Asp Glu Asp Tyr Ile Gln  
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115 120 125Tyr Ala Leu Asp Leu Ile Leu Asp Val Asp Ala Ser Asn Ser Glu Met  
130 135 140Phe Thr Asp Glu Gln His Glu Met Val Glu Ser Ala Ala Glu Met Leu  
145 150 155 160Tyr Gly Leu Ile His Val Arg Tyr Ile Leu Thr Thr Lys Gly Met Ala  
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180 185 190Val Phe Cys Cys Gly Gln Ser Cys Leu Pro Val Gly Gln Ser Asp Ile  
195 200 205



Pro Arg Ser Ser Thr Val Lys Ile Tyr Cys Pro Lys Cys Glu Asp Ile  
 210 215 220

Ser Tyr Pro Arg Ser Lys Phe Gln Gly Asn Ile Asp Gly Ala Tyr Phe  
 225 230 235 240

Gly Thr Thr Phe Pro His Leu Phe Leu Met Thr Tyr Gly Asn Leu Lys  
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<211> 900

<212> DNA

<213> Arabidopsis thaliana

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&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 68

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 35 40 45

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Ala Ile Val Thr Ser Leu Ser Ile Thr Phe Ser Tyr His Arg Asn Leu  
 65 70 75 80

Thr His Lys Ser Phe Lys Leu Pro Lys Trp Leu Glu Tyr Pro Phe Ala  
 85 90 95

Tyr Ser Ala Leu Phe Ala Leu Gln Gly His Pro Ile Asp Trp Val Ser  
 100 105 110

Thr His Arg Phe His His Gln Phe Thr Asp Ser Asp Arg Asp Pro His  
 115 120 125

Ser Pro Ile Glu Gly Phe Trp Phe Ser His Val Phe Trp Ile Phe Asp  
 130 135 140

Thr Ser Tyr Ile Arg Glu Lys Cys Gly Gly Arg Asp Asn Val Met Asp  
 145 150 155 160

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His Ile Leu Thr Phe Trp Thr Leu Val Tyr Leu Trp Gly Gly Leu Pro  
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Tyr Leu Thr Cys Gly Val Gly Val Gly Gly Thr Ile Gly Tyr Asn Gly  
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Thr Trp Leu Ile Asn Ser Ala Cys His Ile Trp Gly Ser Arg Ala Trp  
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Asn Thr Lys Asp Thr Ser Arg Asn Ile Trp Trp Leu Gly Pro Phe Thr  
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Arg His Gly Leu Glu Trp Tyr Gln Val Asp Leu Thr Trp Tyr Leu Ile  
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 Gly Pro Ile Thr Val Ala Pro Pro Glu Thr Val Lys Lys Leu Glu Gln  
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 Ala Ala Arg Arg Leu Ala Lys Ser Val Asn Tyr Val Gly Ala Ala Thr  
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Gly Arg Val Gln Glu Leu Ser Phe Lys Ser Lys Pro Asn Val Trp Ala  
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Tyr Phe Ser Val Lys Ser Gly Gly Gly Ile His Glu Phe Ser Asp Ser  
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Gln Phe Gly His Val Phe Ala Phe Gly Glu Ser Arg Ala Leu Ala Ile  
485 490 495

Ala Asn Met Val Leu Gly Leu Lys Glu Ile Gln Ile Arg Gly Glu Ile  
500 505 510

Arg Thr Asn Val Asp Tyr Thr Ile Asp Leu Leu His Ala Ser Asp Tyr  
515 520 525

Arg Asp Asn Lys Ile His Thr Gly Trp Leu Asp Ser Arg Ile Ala Met  
530 535 540

Arg Val Arg Ala Glu Arg Pro Pro Trp Tyr Leu Ser Val Val Gly Gly  
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Ala Leu Tyr Lys Ala Ser Ala Thr Ser Ala Ala Val Val Ser Asp Tyr  
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Val Gly Tyr Leu Glu Lys Gly Gln Ile Pro Pro Lys His Ile Ser Leu  
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Val His Ser Gln Val Ser Leu Asn Ile Glu Gly Ser Lys Tyr Thr Ile  
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Asp Val Val Arg Gly Gly Ser Gly Thr Tyr Arg Leu Arg Met Asn Lys  
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Ser Glu Val Val Ala Glu Ile His Thr Leu Arg Asp Gly Gly Leu Leu  
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Met Gln Leu Asp Gly Lys Ser His Val Ile Tyr Ala Glu Glu Glu Ala  
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Ala Gly Thr Arg Leu Leu Ile Asp Gly Arg Thr Cys Leu Leu Gln Asn  
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Asp His Asp Pro Ser Lys Leu Met Ala Glu Thr Pro Cys Lys Leu Met  
675 680 685

Arg Tyr Leu Ile Ser Asp Asn Ser Asn Ile Asp Ala Asp Thr Pro Tyr

690

695

700

Ala Glu Val Glu Val Met Lys Met Cys Met Pro Leu Leu Ser Pro Ala  
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Ser Gly Val Ile His Phe Lys Met Ser Glu Gly Gln Ala Met Gln Ala  
725 730 735

Gly Glu Leu Ile Ala Asn Leu Asp Leu Asp Asp Pro Ser Ala Val Arg  
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Lys Ala Glu Pro Phe His Gly Ser Phe Pro Arg Leu Gly Leu Pro Thr  
755 760 765

Ala Ile Ser Gly Arg Val His Gln Arg Cys Ala Ala Thr Leu Asn Ala  
770 775 780

Ala Arg Met Ile Leu Ala Gly Tyr Glu His Lys Val Asp Glu Val Val  
785 790 795 800

Gln Asp Leu Leu Asn Cys Leu Asp Ser Pro Glu Leu Pro Phe Leu Gln  
805 810 815

Trp Gln Glu Cys Phe Ala Val Leu Ala Thr Arg Leu Pro Lys Asn Leu  
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Arg Asn Met Leu Glu Ser Lys Tyr Arg Glu Phe Glu Ser Ile Ser Arg  
835 840 845

Asn Ser Leu Thr Thr Asp Phe Pro Ala Lys Leu Leu Lys Gly Ile Leu  
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Glu Ala His Leu Ser Ser Cys Asp Glu Lys Glu Arg Gly Ala Leu Glu  
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885 890 895

Arg Glu Ser His Ala Arg Val Ile Val His Ser Leu Phe Glu Glu Tyr  
900 905 910

Leu Ser Val Glu Glu Leu Phe Asn Asp Asn Met Leu Ala Asp Val Ile  
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Glu Arg Met Arg Gln Leu Tyr Lys Lys Asp Leu Leu Lys Ile Val Asp  
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Lys Leu Ile Arg Phe Ser Thr Leu Asn His Thr Asn Tyr Ser Glu Leu  
980 985 990

Ala Leu Lys Ala Ser Gln Leu Leu Glu Gln Thr Lys Leu Ser Glu Leu  
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Arg Ser Asn Ile Ala Arg Ser Leu Ser Glu Leu Glu Met Phe Thr  
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Glu Asp Gly Glu Asn Met Asp Thr Pro Lys Arg Lys Ser Ala Ile  
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Asp Ala Leu Val Gly Leu Phe Asp His Ser Asp His Thr Leu Gln  
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Ile Gly Leu Asp Asp Pro Asp Thr Ser Glu Lys Gly Leu Val Glu  
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Lys Arg Ser Lys Arg Lys Trp Gly Ala Met Phe Leu Pro Ser Ile  
1130 1135 1140

Ile Ser Ala Ala Leu Arg Glu Thr Lys His Asn Asp Tyr Glu Thr  
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Ala Gly Ala Pro Leu Ser Gly Asn Met Met His Ile Ala Ile Val  
1160 1165 1170

Gly Ile Asn Asn Gln Met Ser Leu Leu Gln Asp Ser Gly Asp Glu  
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Ile	Ser	Cys	Ile	Ile	Gln	Arg	Asp	Glu	Gly	Arg	Thr	Pro	Met	Arg
1220						1225					1230			
His	Ser	Phe	His	Trp	Ser	Leu	Glu	Lys	Gln	Tyr	Tyr	Val	Glu	Glu
1235						1240					1245			
Pro	Leu	Leu	Arg	His	Leu	Glu	Pro	Pro	Leu	Ser	Ile	Tyr	Leu	Glu
1250						1255					1260			
Leu	Asp	Lys	Leu	Lys	Gly	Tyr	Ser	Asn	Ile	Gln	Tyr	Thr	Pro	Ser
1265						1270					1275			
Arg	Asp	Arg	Gln	Trp	His	Leu	Tyr	Thr	Val	Thr	Asp	Lys	Pro	Val
1280						1285					1290			
Pro	Ile	Lys	Arg	Met	Phe	Leu	Arg	Ser	Leu	Val	Arg	Gln	Ala	Thr
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Met	Asn	Asp	Gly	Phe	Ile	Leu	Gln	Gln	Gly	Gln	Asp	Lys	Gln	Leu
1310						1315					1320			
Ser	Gln	Thr	Leu	Ile	Ser	Met	Ala	Phe	Thr	Ser	Lys	Cys	Val	Leu
1325						1330					1335			
Arg	Ser	Leu	Met	Asp	Ala	Met	Glu	Glu	Leu	Glu	Leu	Asn	Ala	His
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Asn	Ala	Ala	Met	Lys	Pro	Asp	His	Ala	His	Met	Phe	Leu	Cys	Ile
1355						1360					1365			
Leu	Arg	Glu	Gln	Gln	Ile	Asp	Asp	Leu	Val	Pro	Phe	Pro	Arg	Arg
1370						1375					1380			
Val	Glu	Val	Asn	Ala	Glu	Asp	Glu	Glu	Thr	Thr	Val	Glu	Met	Ile
1385						1390					1395			
Leu	Glu	Glu	Ala	Ala	Arg	Glu	Ile	His	Arg	Ser	Val	Gly	Val	Arg
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Met	His	Arg	Leu	Gly	Val	Cys	Glu	Trp	Glu	Val	Arg	Leu	Trp	Leu
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Val	Ser	Ser	Gly	Leu	Ala	Cys	Gly	Ala	Trp	Arg	Val	Val	Val	Ala
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Lys	Gly	Pro	Leu	His	Glu	Thr	Pro	Ile	Ser	Asp	Gln	Tyr	Lys	Pro
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Leu	Gly	Tyr	Leu	Asp	Arg	Gln	Arg	Leu	Ala	Ala	Arg	Arg	Ser	Asn
	1490					1495					1500			
Thr	Thr	Tyr	Cys	Tyr	Asp	Phe	Pro	Leu	Ala	Phe	Gly	Thr	Ala	Leu
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Glu	Leu	Leu	Trp	Ala	Ser	Gln	His	Pro	Gly	Val	Lys	Lys	Pro	Tyr
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Glu	Gly	Ser	Ser	Gly	Thr	Ser	Leu	Asp	Leu	Val	Glu	Arg	Pro	Pro
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Thr	Pro	Glu	Phe	Pro	Met	Gly	Arg	Lys	Leu	Leu	Val	Ile	Ala	Asn
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Phe	Phe	Leu	Ala	Val	Thr	Glu	Leu	Ala	Cys	Ala	Lys	Lys	Leu	Pro
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1655

1660

1665

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Thr	Gly	Phe	Ser	Thr	Leu	Asn	Lys	Leu	Leu	Gly	Arg	Glu	Val	Tyr
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Lys	Asn	Ser	Phe	Ile	Glu	Thr	Leu	Glu	Gly	Trp	Ala	Arg	Thr	Val
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Ala Val	Glu Thr	Gln Thr	Val	Met Gln Ile Ile	Pro	Ala Asp Pro
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Gln Ala	Gly Ser	Thr Ile	Val	Glu Asn Leu Arg	Thr	Tyr Arg Gln
1970			1975		1980	
Pro Val	Phe Val	Tyr Ile	Pro	Met Met Gly Glu	Leu	Arg Gly Gly
1985			1990		1995	
Ala Trp	Val Val	Val Asp	Ser	Gln Ile Asn Ser	Asp	Tyr Val Glu
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Met Tyr	Ala Asp	Glu Thr	Ala	Arg Gly Asn Val	Leu	Glu Pro Glu
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Gln Gln	Gln Ile	Lys Ala	Arg	Glu Lys Gln Leu	Leu	Pro Val Tyr
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 gggcacgtgc ctgtttacgt aggccacgag atggagcggg tcgtggtgaa tgcggagctg 180  
 ctcaaccacc ccgttttcgt agcgttgctg aagcagtcgg ctcaagagta tggatacgag 240  
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<212> PRT

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50 55 60Val Phe Val Ala Leu Leu Lys Gln Ser Ala Gln Glu Tyr Gly Tyr Glu  
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<213> Arabidopsis thaliana

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Arg Ser Ser Ser Ser Leu Ser Asp Leu Gly Asn Arg Arg His Cys Ser  
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Ser Thr Arg Gly Phe Gln Phe Trp Ser Tyr Lys Arg Ser Glu Ala Ala  
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Ser Pro Phe Lys Thr Arg Tyr Arg Glu Asn Glu Glu Glu Glu Asp Met  
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Thr Ile Lys Pro Ala Val Arg Ile Ser Asp Gly Asn Leu Ile Ile Lys  
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Asn Arg Thr Ile Leu Thr Gly Val Pro Asp Asn Val Ile Thr Thr Ser  
115 120 125

Ala Ser Glu Ala Gly Pro Val Glu Gly Val Phe Val Gly Ala Val Phe  
130 135 140

Asn Lys Glu Glu Ser Lys His Ile Val Pro Ile Gly Thr Leu Arg Asn  
145 150 155 160

Ser Arg Phe Met Ser Cys Phe Arg Phe Lys Leu Trp Trp Met Ala Gln  
165 170 175

Arg Met Gly Glu Met Gly Arg Asp Ile Pro Tyr Glu Thr Gln Phe Leu  
Page 111

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 Glu Gly Ser Phe Arg Ser Cys Leu Gln Gly Asn Val Asn Asp Glu Val  
 225 230 235 240  
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 325 330 335  
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 340 345 350  
 Gly Asp Glu Lys Lys Glu Ser Pro Ile Phe Arg Leu Thr Gly Ile Lys  
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 Glu Asn Glu Lys Phe Lys Lys Lys Asp Asp Pro Asn Val Gly Ile Lys  
 370 375 380  
 Asn Ile Val Lys Ile Ala Lys Glu Lys His Gly Leu Lys Tyr Val Tyr  
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 Val Trp His Ala Ile Thr Gly Tyr Trp Gly Gly Val Arg Pro Gly Glu  
 405 410 415  
 Glu Tyr Gly Ser Val Met Lys Tyr Pro Asn Met Ser Lys Gly Val Val  
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Glu Asn Asp Pro Thr Trp Lys Thr Asp Val Met Thr Leu Gln Gly Leu  
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 Gly Leu Val Ser Pro Lys Lys Val Tyr Lys Phe Tyr Asn Glu Leu His  
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 Ser Tyr Leu Ala Asp Ala Gly Val Asp Gly Val Lys Val Asp Val Gln  
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 Cys Val Leu Glu Thr Leu Gly Gly Gly Leu Gly Gly Arg Val Glu Leu  
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 Thr Arg Gln Phe His Gln Ala Leu Asp Ser Ser Val Ala Lys Asn Phe  
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 Tyr Cys Ser Lys Gln Ala Ala Val Ile Arg Ala Ser Asp Asp Phe Tyr  
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 Pro Arg Asp Pro Val Ser His Thr Ile His Ile Ala Ser Val Ala Tyr  
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 595 600 605  
 Glu Leu Leu Arg Lys Leu Val Leu Pro Asp Gly Ser Ile Leu Arg Ala  
 610 615 620  
 Arg Leu Pro Gly Arg Pro Thr Arg Asp Cys Leu Phe Ala Asp Pro Ala  
 625 630 635 640  
 Arg Asp Gly Val Ser Leu Leu Lys Ile Trp Asn Met Asn Lys Tyr Thr  
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 Glu Arg Lys Asn Ile Phe His Gln Thr Lys Thr Asp Ser Leu Thr Gly  
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705 710 715 720

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725 730 735

Ile Arg Glu His Glu Ile Phe Thr Val Ser Pro Ile Ser His Leu Val  
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Asp Gly Val Ser Phe Ala Pro Ile Gly Leu Val Asn Met Tyr Asn Ser  
755 760 765

Gly Gly Ala Ile Glu Gly Leu Arg Tyr Glu Ala Glu Lys Met Lys Val  
770 775 780

Val Met Glu Val Lys Gly Cys Gly Lys Phe Gly Ser Tyr Ser Ser Val  
785 790 795 800

Lys Pro Lys Arg Cys Val Val Glu Ser Asn Glu Ile Ala Phe Glu Tyr  
805 810 815

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<212> PRT

<213> Arabidopsis thaliana

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Gly Ser Thr Asp Ile Thr Asp Thr Trp Glu Pro Thr Glu Glu Gly Leu  
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<213> *Arabidopsis thaliana*

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&lt;211&gt; 283

&lt;212&gt; PRT

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Page 117

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&lt;211&gt; 2265

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<213> *Arabidopsis thaliana*

&lt;400&gt; 81

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<212> PRT

<213> *Arabidopsis thaliana*

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Ser Val Asn Asp Met Tyr Lys Leu Leu Gln Glu Tyr Asn Ser Ser Leu  
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Gln Leu Tyr Asn Ser Lys Leu Gln Gly Asp Leu Asp Glu Ala His Glu  
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Thr Ile Lys Arg Gly Glu Lys Glu Arg Thr Ala Ile Ile Glu Asn Ile  
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Arg Asp Arg His Leu Val Glu Val Lys Thr Leu Gln Thr Glu Ala Thr  
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Lys Tyr Asn Asp Phe Lys Asp Ala Ile Thr Glu Leu Glu Thr Thr Cys  
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Ser Glu Arg Arg Leu Gln Val Ser Asp Leu Ser Thr Phe Glu Lys Met  
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<213> Arabidopsis thaliana

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&lt;211&gt; 1613

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

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 Glu Ser Gly Leu Lys Ser Glu Ile Leu Lys Phe Thr Glu Lys Gly Gly  
 260 265 270  
 Leu Val Asp Ser Glu Gly Val Glu Lys Leu Val Gln Leu Met Leu Pro  
 275 280 285  
 Glu Arg Asn Glu Lys Lys Ile Asp Leu Val Gly Arg Ala Ile Leu Ala  
 290 295 300  
 Gly Phe Val Ala Ala Thr Asp Lys Phe Asp Cys Leu Ser Arg Phe Val  
 305 310 315 320  
 Gln Leu Arg Gly Leu Pro Val Phe Asp Glu Trp Leu Gln Glu Val His  
 325 330 335  
 Lys Gly Lys Val Gly Asp Gly Gly Ser Pro Lys Asp Ser Asp Arg Leu  
 340 345 350  
 Val Asp Asp Phe Leu Leu Val Leu Leu Arg Ala Leu Asp Lys Leu Pro  
 Page 127

355 047-E2F-PCT.ST25.txt  
 360 365  
 Val Asn Leu Asn Ala Leu Gln Thr Cys Asn Ile Gly Lys Ser Val Asn  
 370 375 380  
 His Leu Arg Ser His Lys Asn Ser Glu Ile Gly Lys Lys Ala Arg Ser  
 385 390 395 400  
 Leu Val Asp Thr Trp Lys Lys Arg Val Glu Ala Glu Met Asp Ala Lys  
 405 410 415  
 Ser Gly Ser Asn Gln Gly Val Ser Trp Pro Gly Arg Leu Ser His Gly  
 420 425 430  
 Gly Arg His Ser Gly Gly Ser Ala Glu Ala Asn Lys Thr Ser Ser Ser  
 435 440 445  
 His Leu His Ala Ser Lys Ser Val Ser Val Lys Gln Gln Val Glu Asn  
 450 455 460  
 Asn Leu Lys Cys Val Ala Thr Ser Pro Gly Ser Thr Arg Ser Ala Pro  
 465 470 475 480  
 Ser Pro Gly Ser Gly Gly Asn Val Ser Lys Asp Gly Gln Gln Arg Asn  
 485 490 495  
 Ala Gly Ala Gly Gly Val Ser Glu Val Leu Ala Ala Val Lys Asp Glu  
 500 505 510  
 Lys Ser Ser Ser Ser Ser Gln Ser His Asn Asn Ser Gln Ser Cys Ser  
 515 520 525  
 Ser Glu His Ala Lys Thr Gly Asn Leu Cys Gly Lys Glu Asp Ala Arg  
 530 535 540  
 Ser Ser Thr Ala Gly Ser Thr Leu Lys Lys Cys Ser Gly Gly Ser Ser  
 545 550 555 560  
 Arg His Arg Lys Ser Asn Asn Val Phe Gln Gly Ser Ser Ser Ser Ala  
 565 570 575  
 Ser Pro Arg Gly Ala Gly Leu Ser Arg Ser Phe Ser Ser His Arg Asn  
 580 585 590  
 Val Pro Ser Glu Lys Ile Ser Gln Ser Ser Leu Thr Ser Glu Lys Thr  
 595 600 605

047-E2F-PCT.ST25.txt

Leu Glu Val Pro Leu Thr Glu Gly Ser Gly Asn Lys Leu Ile Val Lys  
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 625 630 635 640  
 Leu Glu Asp Pro Ala Pro Val Asn Ser Arg Val Ser Ser Pro Val His  
 645 650 655  
 Ala Val Lys Gln Glu Leu Cys Asp Asn Asn Gly Arg Glu Lys Asn His  
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 Ser Tyr Arg Pro Asn Val Ser Ser Val Leu Asn Ala Glu Ser Trp Gln  
 675 680 685  
 Ser Asn Glu Leu Lys Asp Ile Leu Thr Gly Ser Gln Glu Ala Ala Gly  
 690 695 700  
 Ser Pro Leu Val Ala Gly Asp Glu Arg Gly Gly Asp Leu Lys Asp Ser  
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 Asp Lys Ala Ser Gly Asn Val Lys Gly Thr Ser Ser Leu Gly Asn Glu  
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 Phe Lys Ser Gly Glu Arg His Gly Gly Thr Leu Ser Ser Met Asn Ala  
 740 745 750  
 Leu Ile Glu Ser Cys Val Arg Tyr Ser Glu Thr Asn Ala Ser Leu Ala  
 755 760 765  
 Gly Ser Asp Asp Val Gly Met Asn Leu Leu Ala Ser Val Ala Ala Asp  
 770 775 780  
 Glu Met Ser Lys Ser Pro Val Ala Ser Pro Ser Val Ser Gln Pro Pro  
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 Asn Ser Val Met Asn Glu Asn Ser Thr Val Gly Asn Asn Thr Lys Leu  
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 Met Ala Ser Asp Gly Leu Pro His Glu Gln His Gln Ala Val Cys Thr  
 820 825 830  
 Ser Val Ser Thr Glu Gln Gly Glu Gln His Val Ser Ser Ser Gly Thr  
 835 840 845  
 Gln Leu Glu Ser Glu Ile Lys Asn Glu Ser Lys Thr Gly Asp Arg Asp  
 850 855 860

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Lys Ser Ser Asn Ser Asp Thr Glu Asp Leu Gln Arg Leu Val Asp Gln  
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 Cys Leu Glu Ser Asn Asp Asn Ser Asp Gly Val Val Ala Ser Pro Ala  
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 Leu Pro Thr Lys Ala Val Lys Glu Lys Ile Leu Asn Asp Ser Asp Ser  
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 Gly Glu Leu Lys Asp Ile Lys Thr Asp Val Lys Ser Glu Ala Asp Cys  
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 Thr Ser Asp Ser Thr Lys Arg Val Ala Ser Ser Met Leu Thr Glu Cys  
 930 935 940  
 Arg Asp Val Ser Lys Lys Val Asp Ser Val Ala Val Glu Gln Thr Pro  
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 965 970 975  
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 980 985 990  
 Ser Gly Ile Ser Arg Asp Met Asp Ala Val Ser Ile Gly Arg Pro Ile  
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 Asp Val Lys Lys Ile Lys Gln Asp Cys Asp Thr Ser Val Gly Ala  
 1025 1030 1035  
 Ile Lys Asp Thr Ser Ala Gly Leu Asp Ser Ser Val Thr Lys Gly  
 1040 1045 1050  
 Lys Val Glu Pro Val Glu Gly Asn Leu Glu Asn Ser Glu Val Lys  
 1055 1060 1065  
 Glu Arg Tyr Ser Gly Leu Arg Ala Thr Pro Gly Leu Ser Pro Lys  
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 Glu Ala Glu Asp Leu Glu Arg Pro Asn Gly Pro Lys Thr Ser Asp  
 1085 1090 1095  
 Ala Asp Gly Asp Glu Ala Gly Glu Cys Thr Ser Ala Ala Arg Asp  
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Ala Ser Ser Val Ser Ala Ala Ala Ser Ala Gly Ser Glu Met Asp  
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Ala Arg Val Glu Phe Asp Leu Asn Glu Gly Phe Asp Gly Asp Asp  
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Ala Lys His Gly Asp Ser Asn Asn Phe Ser Gly Ser Val Phe Leu  
1145 1150 1155

Thr Pro Thr Pro Leu Gln Pro Val Lys Thr Leu Pro Phe Pro Val  
1160 1165 1170

Ala Pro Val Ser Ser Gly Thr Arg Ala Ser Ile Thr Val Ala Ala  
1175 1180 1185

Ala Ala Lys Gly Pro Phe Val Pro Pro Glu Asp Leu Leu Arg Asn  
1190 1195 1200

Lys Gly Ala Val Gly Trp Arg Gly Ser Ala Ala Thr Ser Ala Phe  
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Arg Pro Ala Glu Pro Arg Lys Pro Gln Asp Val Leu Leu Ser Ile  
1220 1225 1230

Asn Asn Thr Ser Thr Ser Asp Ala Ser Thr Ser Ala Gly Lys Gln  
1235 1240 1245

Thr Arg Thr Phe Leu Asp Phe Asp Leu Asn Val Pro Asp Glu Arg  
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Val Leu Glu Asp Leu Ala Ser Gln Arg Ser Gly Asn Pro Thr Asn  
1265 1270 1275

Cys Thr Ser Asp Ile Thr Asn Ser Phe Asp Gln Val Arg Ser Gly  
1280 1285 1290

Val Met Gly Ser Ala Leu Asp His Ser Ser Gly Gly Leu Asp Leu  
1295 1300 1305

Asp Leu Asn Lys Val Asp Asp Ser Thr Asp Met Ile Ser Tyr Thr  
1310 1315 1320

Met Asn Ser Ser His Arg Leu Asp Ser Ser Phe Gln Gln Val Lys  
1325 1330 1335

Leu Pro Ser Thr Gly Gly Arg Arg Asp Phe Asp Leu Asn Asp Gly  
Page 131

1340

1345

1350

Pro Val Gly Asp Asp Ala Ala Val Glu Pro Ser Met Val Leu Asn  
 1355 1360 1365  
 Gln His Ser Arg Ser Gly Leu Pro Ser Gln Pro Ser Leu Ser Gly  
 1370 1375 1380  
 Ile Arg Val Asn Gly Glu Asn Met Ala Ser Phe Ser Thr Trp Phe  
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 Pro Ala Ala Asn Ala Tyr Ser Ala Val Ser Met Pro Pro Ile Met  
 1400 1405 1410  
 Pro Glu Arg Gly Asp Gln Pro Phe Pro Met Ile Ala Thr Arg Gly  
 1415 1420 1425  
 Pro Gln Arg Met Leu Gly Pro Thr Thr Gly Val Ser Ser Phe Thr  
 1430 1435 1440  
 Pro Glu Gly Tyr Arg Gly Pro Val Leu Ser Ser Ser Pro Ala Met  
 1445 1450 1455  
 Pro Phe Gln Ser Thr Thr Phe Gln Tyr Pro Val Phe Pro Phe Gly  
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 1475 1480 1485  
 Ala His Met Asp Ser Ser Ser Ser Gly Arg Ala Cys Phe Pro Gly  
 1490 1495 1500  
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 Tyr Pro Arg Pro Tyr Ile Val Gly Leu Pro Asn Gly Gly Ser Asn  
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 Gly Gly Val Leu Asp Asn Gly Ala Lys Trp Phe Arg Ser Gly Leu  
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 Asp Leu Asn Ser Gly Pro Gly Gly His Glu Thr Glu Gly Arg Asp  
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 Glu Ser Thr Leu Val Ala Arg Gln Leu Ser Ser Ser Ala Ser Leu  
 1565 1570 1575

047-E2F-PCT.ST25.txt

Pro Leu Lys Glu Asp Gln Ala Arg Met Tyr Gln Met Ser Gly Gly  
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Val Leu Lys Arg Lys Glu Pro Glu Gly Gly Trp Asp Gly Tyr Arg  
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Gln Ser Ser Trp Gln  
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<211> 876

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<213> Arabidopsis thaliana

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gataatgtta gacaattctt ttcttctcct cctcctgctc ttgctcctcg tgaagtgaga 180  
gtagctgaag tgattgttga acggaacagg gatctttcac ctcttctac agcagatgct 240  
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tcagaagaga atcaggctgc ccagaaacaa ctcttcaga aacatgctaa agagctagct 600  
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<210> 86

<211> 291

<212> PRT

<213> Arabidopsis thaliana

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Val Ile Ser Asn Pro Pro Val Val Asp Asn Val Arg Gln Ser Ser Ser  
35 40 45

Ser Pro Pro Pro Ala Leu Ala Pro Arg Glu Val Arg Val Ala Glu Val  
50 55 60

Ile Val Glu Arg Asn Arg Asp Leu Ser Pro Pro Ser Thr Ala Asp Ala  
65 70 75 80

Val Asn Val Thr Ala Thr Asp Val Pro Val Val Pro Ser Ser Ser Ala  
85 90 95

Pro Gly Val Val Arg Arg Ala Thr Pro Thr Arg Phe Ala Gly Lys Ser  
100 105 110

Asn Glu Glu Ala Ala Ala Ile Leu Ile Gln Thr Ile Phe Arg Gly Tyr  
115 120 125

Leu Ala Arg Arg Ala Leu Arg Ala Met Arg Gly Leu Val Arg Leu Lys  
130 135 140

Leu Leu Met Glu Gly Ser Val Val Lys Arg Gln Ala Ala Asn Thr Leu  
145 150 155 160

Lys Cys Met Gln Thr Leu Ser Arg Val Gln Ser Gln Ile Arg Ala Arg  
165 170 175

Arg Ile Arg Met Ser Glu Glu Asn Gln Ala Arg Gln Lys Gln Leu Leu  
180 185 190

Gln Lys His Ala Lys Glu Leu Ala Gly Leu Lys Asn Gly Asp Asn Trp  
195 200 205

Asn Asp Ser Ile Gln Ser Lys Glu Lys Val Glu Ala Asn Leu Leu Ser  
210 215 220

Lys Tyr Glu Ala Thr Met Arg Arg Glu Arg Ala Leu Ala Tyr Ser Tyr  
225 230 235 240

Ser His Gln Gln Asn Trp Lys Asn Asn Ser Lys Ser Gly Asn Pro Met  
 245 250 255

Phe Met Asp Pro Ser Asn Pro Thr Trp Gly Trp Ser Trp Leu Glu Arg  
 260 265 270

Trp Met Ala Gly Arg Pro Leu Glu Ser Ser Glu Lys Glu Gln Lys Gln  
 275 280 285

Gln Gln Gln  
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<210> 87

<211> 810

<212> DNA

<213> Arabidopsis thaliana

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ccaaactcca attggtacac tcaagaaatg gattcaacaa gccaaagtag actcaaatgg      720
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<210> 88

<211> 269

<212> PRT

<213> Arabidopsis thaliana

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20 25 30

Gly Asn Gly Arg Gly Lys Ile Leu Asn Asn Gly Gln Leu Leu Thr Leu  
35 40 45

Ser Leu Asp Lys Ser Ser Gly Ser Gly Phe Gln Ser Lys Thr Glu Tyr  
50 55 60

Leu Phe Gly Lys Ile Asp Met Gln Ile Lys Leu Val Pro Gly Asn Ser  
65 70 75 80

Ala Gly Thr Val Thr Thr Phe Tyr Leu Lys Ser Glu Gly Ser Thr Trp  
85 90 95

Asp Glu Ile Asp Phe Glu Phe Leu Gly Asn Met Ser Gly Asp Pro Tyr  
100 105 110

Thr Leu His Thr Asn Val Tyr Thr Gln Gly Lys Gly Asp Lys Glu Gln  
115 120 125

Gln Phe His Leu Trp Phe Asp Pro Thr Ala Asn Phe His Thr Tyr Ser  
130 135 140

Ile Leu Trp Asn Pro Gln Arg Ile Ile Leu Thr Val Asp Asp Thr Pro  
145 150 155 160

Ile Arg Glu Phe Lys Asn Tyr Glu Ser Leu Gly Val Leu Phe Pro Lys  
165 170 175

Asn Lys Pro Met Arg Met Tyr Ala Ser Leu Trp Asn Ala Asp Asp Trp  
180 185 190

Ala Thr Arg Gly Gly Leu Val Lys Thr Asp Trp Ser Lys Ala Pro Phe  
195 200 205

Met Ala Ser Tyr Arg Asn Ile Lys Ile Asp Ser Lys Pro Asn Ser Asn  
210 215 220

Trp Tyr Thr Gln Glu Met Asp Ser Thr Ser Gln Ala Arg Leu Lys Trp  
225 230 235 240

Val Gln Lys Asn Tyr Met Ile Tyr Asn Tyr Cys Thr Asp His Arg Arg  
245 250 255

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&lt;210&gt; 89

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<212> DNA

<213> Arabidopsis thaliana

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tctggtcatg	tacaggtctg	ggacatgagc	tctcatctta	atgctttagc	cgaatcagaa				600
acagagggta	aagatggaac	ttcaccggtt	cttaaccaag	cacccttggt	taacttttct				660
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gaatttcaatg	cacagaccaa	ggaactatgc	aacacacctc	aaagacttgc	tcctcaqctt				1260

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<210> 90

<211> 469

<212> PRT

<213> Arabidopsis thaliana

<400> 90

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 35 40 45

Pro Ser Ala Tyr Asn Ser Leu His Gly Phe His Val Gly Trp Pro Cys  
 50 55 60

Leu Ser Phe Asp Ile Leu Gly Asp Lys Leu Gly Leu Asn Arg Thr Glu  
 65 70 75 80

Phe Pro His Thr Leu Tyr Met Val Ala Gly Thr Gln Ala Glu Lys Ala  
 85 90 95

Ala His Asn Ser Ile Gly Leu Phe Lys Ile Thr Asn Val Ser Gly Lys  
 100 105 110

Arg Arg Asp Val Val Pro Lys Thr Phe Gly Asn Gly Glu Asp Glu Asp  
 115 120 125

Glu Asp Asp Glu Asp Asp Ser Asp Ser Asp Asp Asp Asp Gly Asp Glu  
 130 135 140

Ala Ser Lys Thr Pro Asn Ile Gln Val Arg Arg Val Ala His His Gly  
 145 150 155 160

Cys Val Asn Arg Ile Arg Ala Met Pro Gln Asn Ser His Ile Cys Val  
 165 170 175



Ser Trp Ala Asp Ser Gly His Val Gln Val Trp Asp Met Ser Ser His  
 180 185 190  
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 195 200 205  
 Pro Val Leu Asn Gln Ala Pro Leu Val Asn Phe Ser Gly His Lys Asp  
 210 215 220  
 Glu Gly Tyr Ala Ile Asp Trp Ser Pro Ala Thr Ala Gly Arg Leu Leu  
 225 230 235 240  
 Ser Gly Asp Cys Lys Ser Met Ile His Leu Trp Glu Pro Ala Ser Gly  
 245 250 255  
 Ser Trp Ala Val Asp Pro Ile Pro Phe Ala Gly His Thr Ala Ser Val  
 260 265 270  
 Glu Asp Leu Gln Trp Ser Pro Ala Glu Glu Asn Val Phe Ala Ser Cys  
 275 280 285  
 Ser Val Asp Gly Ser Val Ala Val Trp Asp Ile Arg Leu Gly Lys Ser  
 290 295 300  
 Pro Ala Leu Ser Phe Lys Ala His Asn Ala Asp Val Asn Val Ile Ser  
 305 310 315 320  
 Trp Asn Arg Leu Ala Ser Cys Met Leu Ala Ser Gly Ser Asp Asp Gly  
 325 330 335  
 Thr Phe Ser Ile Arg Asp Leu Arg Leu Ile Lys Gly Gly Asp Ala Val  
 340 345 350  
 Val Ala His Phe Glu Tyr His Lys His Pro Ile Thr Ser Ile Glu Trp  
 355 360 365  
 Ser Ala His Glu Ala Ser Thr Leu Ala Val Thr Ser Gly Asp Asn Gln  
 370 375 380  
 Leu Thr Ile Trp Asp Leu Ser Leu Glu Lys Asp Glu Glu Glu Glu Ala  
 385 390 395 400  
 Glu Phe Asn Ala Gln Thr Lys Glu Leu Val Asn Thr Pro Gln Asp Leu  
 405 410 415  
 Pro Pro Gln Leu Leu Phe Val His Gln Gly Gln Lys Asp Leu Lys Glu  
 420 425 430

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Leu His Trp His Asn Gln Ile Pro Gly Met Ile Ile Ser Thr Ala Gly  
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Asp Gly Phe Asn Ile Leu Met Pro Tyr Asn Ile Gln Asn Thr Leu Pro  
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Ser Glu Leu Pro Ala  
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<211> 825

<212> DNA

<213> Arabidopsis thaliana

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	cgttttgtca aggatttatc tcagcctgga gttttcctca acattgagtc agctgtatct	300
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<211> 274

<212> PRT

<213> Arabidopsis thaliana

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20 25 30

Thr Ser Leu Asn Asn Leu Asp Asp Gly Cys Leu Met His Ile Leu Ser  
35 40 45

Phe Leu Ser Pro Ile Pro Asp Arg Tyr Asn Thr Ala Leu Val Cys His  
50 55 60

Arg Trp Arg Tyr Leu Ala Cys His Pro Arg Leu Trp Leu Arg Val Asp  
65 70 75 80

Arg Phe Val Lys Asp Leu Ser Gln Pro Gly Val Phe Leu Asn Ile Glu  
85 90 95

Ser Ala Val Ser Ala Ala Arg Pro Gly Asp Thr Ile Leu Ile Val Ala  
100 105 110

Gly Gly Asn Tyr Arg Val Ser Asn Ile Gln Ile Lys Lys Pro Leu Cys  
115 120 125

Leu Val Gly Gly Gly Glu Ile Pro Asp Glu Thr Thr Leu Val Cys Ala  
130 135 140

Arg Gly Ser Asp Ser Ala Leu Glu Leu Leu Ser Thr Cys Lys Leu Ala  
145 150 155 160

Asn Leu Thr Val Lys Ala Glu Leu Gly Cys Cys Leu Leu His Arg Ser  
165 170 175

Gly Arg Leu Thr Ile Asp Gly Cys Val Leu Gln Cys Glu Thr Asn Pro  
180 185 190

Leu Asp His Leu Ser Cys Pro Ile Val Ser Thr Ala Gly Asp Glu Asp  
195 200 205

Ile Glu Asn Ile Leu Ser His Val Glu Val Lys Glu Thr Val Thr Gly  
210 215 220

Lys Ile Lys Ala Asn Ser Val Thr Val Leu Gln Thr Arg Ile Glu Gly  
225 230 235 240

Gly Ala Lys Ala Val Ser Thr Arg Gly Asp Leu Val Leu Gln Arg Val  
Page 141

Arg Val Met Tyr Ser Lys Ala Tyr Leu Tyr Phe Trp Phe Asp Val Asp  
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Tyr Glu

<210> 93

<211> 3396

<212> DNA

<213> Arabidopsis thaliana

<400> 93

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<211> 1131

<212> PRT

<213> Arabidopsis thaliana

<400> 94

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Gly Phe <sub>35</sub> Phe Phe Asn Met Lys <sub>40</sub> Tyr Phe Glu Asp Glu <sub>45</sub> Val His Asn Gly

Asn Trp <sub>50</sub> Asp Glu Val <sub>55</sub> Glu Lys Tyr Leu Ser Gly <sub>60</sub> Phe Thr Lys Val Asp

Asp Asn Arg Tyr Ser <sub>70</sub> Met Lys Ile Phe <sub>75</sub> Phe Glu Ile Arg Lys Gln <sub>80</sub> Lys

Tyr Leu Glu Ala <sub>85</sub> Leu Asp Lys His Asp <sub>90</sub> Arg Pro Lys Ala Val <sub>95</sub> Asp Ile

Leu Val Lys <sub>100</sub> Asp Leu Lys Val <sub>105</sub> Phe Ser Thr Phe Asn Glu <sub>110</sub> Glu Leu Phe

Lys Glu <sub>115</sub> Ile Thr Gln Leu Leu <sub>120</sub> Thr Leu Glu Asn <sub>125</sub> Phe Arg Glu Asn Glu

Gln <sub>130</sub> Leu Ser Lys Tyr Gly <sub>135</sub> Asp Thr Lys Ser Ala <sub>140</sub> Arg Ala Ile Met Leu

Val <sub>145</sub> Glu Leu Lys Lys <sub>150</sub> Leu Ile Glu Ala Asn <sub>155</sub> Pro Leu Phe Arg Asp <sub>160</sub> Lys

047-E2F-PCT.ST25.txt

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Gln Ser Leu Asn Trp Gln His Gln Leu Cys Lys Asn Pro Arg Pro Asn  
180 185 190

Pro Asp Ile Lys Thr Leu Phe Val Asp His Ser Cys Gly Pro Pro Asn  
195 200 205

Gly Ala Arg Ala Pro Ser Pro Val Asn Asn Pro Leu Leu Gly Gly Ile  
210 215 220

Pro Lys Ala Gly Gly Phe Pro Pro Leu Gly Ala His Gly Pro Phe Gln  
225 230 235 240

Pro Thr Ala Ser Pro Val Pro Thr Pro Leu Ala Gly Trp Met Ser Ser  
245 250 255

Pro Ser Ser Val Pro His Pro Ala Val Ser Ala Gly Ala Ile Ala Leu  
260 265 270

Gly Gly Pro Ser Ile Pro Ala Ala Leu Lys His Pro Arg Thr Pro Pro  
275 280 285

Thr Asn Ala Ser Leu Asp Tyr Pro Ser Ala Asp Ser Glu His Val Ser  
290 295 300

Lys Arg Thr Arg Pro Met Gly Ile Ser Asp Glu Val Asn Leu Gly Val  
305 310 315 320

Asn Met Leu Pro Met Ser Phe Ser Gly Gln Ala His Gly His Ser Pro  
325 330 335

Ala Phe Lys Ala Pro Asp Asp Leu Pro Lys Thr Val Ala Arg Thr Leu  
340 345 350

Ser Gln Gly Ser Ser Pro Met Ser Met Asp Phe His Pro Ile Lys Gln  
355 360 365

Thr Leu Leu Leu Val Gly Thr Asn Val Gly Asp Ile Gly Leu Trp Glu  
370 375 380

Val Gly Ser Arg Glu Arg Leu Val Gln Lys Thr Phe Lys Val Trp Asp  
385 390 395 400

Leu Ser Lys Cys Ser Met Pro Leu Gln Ala Ala Leu Val Lys Glu Pro  
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047-E2F-PCT.ST25.txt

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Gly Val Ala Tyr Ser Arg His Ile Val Gln Leu Tyr Ser Tyr His Gly  
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Gly Glu Asp Met Arg Gln His Leu Glu Ile Asp Ala His Val Gly Gly  
450 455 460

Val Asn Asp Ile Ser Phe Ser Thr Pro Asn Lys Gln Leu Cys Val Ile  
465 470 475 480

Thr Cys Gly Asp Asp Lys Thr Ile Lys Val Trp Asp Ala Ala Thr Gly  
485 490 495

Val Lys Arg His Thr Phe Glu Gly His Glu Ala Pro Val Tyr Ser Val  
500 505 510

Cys Pro His Tyr Lys Glu Asn Ile Gln Phe Ile Phe Ser Thr Ala Leu  
515 520 525

Asp Gly Lys Ile Lys Ala Trp Leu Tyr Asp Asn Met Gly Ser Arg Val  
530 535 540

Asp Tyr Asp Ala Pro Gly Arg Trp Cys Thr Thr Met Ala Tyr Ser Ala  
545 550 555 560

Asp Gly Thr Arg Leu Phe Ser Cys Gly Thr Ser Lys Asp Gly Glu Ser  
565 570 575

Phe Ile Val Glu Trp Asn Glu Ser Glu Gly Ala Val Lys Arg Thr Tyr  
580 585 590

Gln Gly Phe His Lys Arg Ser Leu Gly Val Val Gln Phe Asp Thr Thr  
595 600 605

Lys Asn Arg Tyr Leu Ala Ala Gly Asp Asp Phe Ser Ile Lys Phe Trp  
610 615 620

Asp Met Asp Ala Val Gln Leu Leu Thr Ala Ile Asp Gly Asp Gly Gly  
625 630 635 640

Leu Gln Ala Ser Pro Arg Ile Arg Phe Asn Lys Glu Gly Ser Leu Leu  
645 650 655

Ala Val Ser Gly Asn Glu Asn Val Ile Lys Ile Met Ala Asn Ser Asp  
660 665 670



047-E2F-PCT.ST25.txt

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 Lys Pro Ala Ile Asn Ser Ile Ala Ala Ala Ala Ala Ala Ala Thr  
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 Ser Ala Gly His Ala Asp Arg Ser Ala Asn Val Val Ser Ile Gln Gly  
 705 710 715 720  
 Met Asn Gly Asp Ser Arg Asn Met Val Asp Val Lys Pro Val Ile Thr  
 725 730 735  
 Glu Glu Ser Asn Asp Lys Ser Lys Ile Trp Lys Leu Thr Glu Val Ser  
 740 745 750  
 Glu Pro Ser Gln Cys Arg Ser Leu Arg Leu Pro Glu Asn Leu Arg Val  
 755 760 765  
 Ala Lys Ile Ser Arg Leu Ile Phe Thr Asn Ser Gly Asn Ala Ile Leu  
 770 775 780  
 Ala Leu Ala Ser Asn Ala Ile His Leu Leu Trp Lys Trp Gln Arg Asn  
 785 790 795 800  
 Glu Arg Asn Ala Thr Gly Lys Ala Thr Ala Ser Leu Pro Pro Gln Gln  
 805 810 815  
 Trp Gln Pro Ala Ser Gly Ile Leu Met Thr Asn Asp Val Ala Glu Thr  
 820 825 830  
 Asn Pro Glu Glu Ala Val Pro Cys Phe Ala Leu Ser Lys Asn Asp Ser  
 835 840 845  
 Tyr Val Met Ser Ala Ser Gly Gly Lys Ile Ser Leu Phe Asn Met Met  
 850 855 860  
 Thr Phe Lys Thr Met Ala Thr Phe Met Pro Pro Pro Ala Ala Thr  
 865 870 875 880  
 Phe Leu Ala Phe His Pro Gln Asp Asn Asn Ile Ile Ala Ile Gly Met  
 885 890 895  
 Asp Asp Ser Thr Ile Gln Ile Tyr Asn Val Arg Val Asp Glu Val Lys  
 900 905 910  
 Ser Lys Leu Lys Gly His Ser Lys Arg Ile Thr Gly Leu Ala Phe Ser  
 Page 147



&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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&lt;210&gt; 96

&lt;211&gt; 356

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 96

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Glu Lys Ile Ile Ala Glu Tyr Ile Trp Val Gly Gly Ser Gly Met Asp
20      25      30

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047-E2F-PCT.ST25.txt

Met Arg Ser Lys Ala Arg Thr Leu Pro Gly Pro Val Thr Asp Pro Ser  
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Lys Leu Pro Lys Trp Asn Tyr Asp Gly Ser Ser Thr Gly Gln Ala Pro  
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Gly Gln Asp Ser Glu Val Ile Leu Tyr Pro Gln Ala Ile Phe Lys Asp  
65 70 75 80

Pro Phe Arg Arg Gly Asn Asn Ile Leu Val Met Cys Asp Ala Tyr Thr  
85 90 95

Pro Ala Gly Glu Pro Ile Pro Thr Asn Lys Arg His Ala Ala Glu  
100 105 110

Ile Phe Ala Asn Pro Asp Val Ile Ala Glu Val Pro Trp Tyr Gly Ile  
115 120 125

Glu Gln Glu Tyr Thr Leu Leu Gln Lys Asp Val Asn Trp Pro Leu Gly  
130 135 140

Trp Pro Ile Gly Gly Phe Pro Gly Pro Gln Gly Pro Tyr Tyr Cys Ser  
145 150 155 160

Ile Gly Ala Asp Lys Ser Phe Gly Arg Asp Ile Val Asp Ala His Tyr  
165 170 175

Lys Ala Ser Leu Tyr Ala Gly Ile Asn Ile Ser Gly Ile Asn Gly Glu  
180 185 190

Val Met Pro Gly Gln Trp Glu Phe Gln Val Gly Pro Ser Val Gly Ile  
195 200 205

Ser Ala Ala Asp Glu Ile Trp Ile Ala Arg Tyr Ile Leu Glu Arg Ile  
210 215 220

Thr Glu Ile Ala Gly Val Val Val Ser Phe Asp Pro Lys Pro Ile Pro  
225 230 235 240

Gly Asp Trp Asn Gly Ala Gly Ala His Thr Asn Tyr Ser Thr Lys Ser  
245 250 255

Met Arg Glu Glu Gly Gly Tyr Glu Ile Ile Lys Lys Ala Ile Glu Lys  
260 265 270

Leu Gly Leu Arg His Lys Glu His Ile Ser Ala Tyr Gly Glu Gly Asn  
275 280 285

Glu Arg Arg Leu Thr Gly His His Glu Thr Ala Asp Ile Asn Thr Phe  
 290 295 300

Leu Trp Gly Val Ala Asn Arg Gly Ala Ser Ile Arg Val Gly Arg Asp  
 305 310 315 320

Thr Glu Lys Glu Gly Lys Gly Tyr Phe Glu Asp Arg Arg Pro Ala Ser  
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Leu Trp Asn Pro  
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<211> 630

<212> DNA

<213> Arabidopsis thaliana

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<210> 98

<211> 209

<212> PRT

<213> Arabidopsis thaliana

&lt;400&gt; 98

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35 40 45Arg Gly Gly Ile Val Ala Arg Asn Ser Ala Gly Ala Ser Glu Thr Ser  
50 55 60Val Val Ile Val Arg Arg Arg Asp Ser Pro Pro Val Glu Glu Gln Cys  
65 70 75 80Gln Ile Glu Glu Glu Asp Ser Ser Val Ser Cys Cys Ser Thr Ser Glu  
85 90 95Glu Lys Ser Lys Arg Arg Ile Glu Phe Val Asp Leu Glu Glu Asn Asn  
100 105 110Gly Asp Asp Arg Glu Thr Glu Thr Ser Trp Ile Tyr Asp Asp Leu Asn  
115 120 125Lys Ser Glu Glu Ser Met Asn Met Asp Ser Ser Ser Val Ala Val Glu  
130 135 140Asp Val Glu Ser Arg Arg Arg Leu Arg Lys Ser Leu His Glu Thr Val  
145 150 155 160Lys Glu Ala Glu Leu Glu Asp Phe Phe Gln Val Ala Glu Lys Asp Leu  
165 170 175Arg Asn Lys Leu Leu Glu Cys Ser Met Lys Tyr Asn Phe Asp Phe Glu  
180 185 190Lys Asp Glu Pro Leu Gly Gly Gly Arg Tyr Glu Trp Val Lys Leu Asn  
195 200 205

Pro

&lt;210&gt; 99

&lt;211&gt; 495

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 99

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gcgaagagca gcgatatttc ctcaaagctt gttggaggtg ttaccaatct tgtgagtgga   360
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&lt;210&gt; 100

&lt;211&gt; 164

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 100

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20     25     30
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35     40     45
Glu Thr Thr Val Ala Ala Ser Val Glu Thr Val Lys Thr Glu Ala Ala
50     55     60
Ala Ala Pro Asp Lys Ala Ser Gly Val Ser Thr Gln Ala Lys Asp Ala
65     70     75     80
Val Asp Lys Ala Phe Ser Arg Gly Ile Glu Gly Ala Lys Ser Leu Leu
85     90     95

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047-E2F-PCT.ST25.txt

Gln Thr Phe Glu Ala Lys Ser Ser Asp Ile Ser Ser Lys Leu Val Gly  
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Gly Val Thr Asn Leu Val Ser Gly Ala Ser Ser Ser Thr Val Ala Asn  
115 120

Arg Asp Leu Pro Val Ser Thr Asp Asn Gln Pro Leu Leu Ala Ser Gly  
130 135 140

Glu Lys Thr Pro Trp Trp Lys Asn Cys Cys Gly Val Leu Asp Leu Phe  
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Lys Lys Asp Thr

<210> 101

<211> 867

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 102

&lt;211&gt; 288

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 102

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35 40 45Leu Ala Val Asn Ala Arg Pro Ser Ser Phe Thr Ile Asn Lys Pro Val  
50 55 60Arg Arg Val Arg Ser Leu Pro Trp Gln Ser Gly Leu Phe Glu Asp Gly  
65 70 75 80Leu Arg Ala Ala Gly Ala Ser Gly Val Glu Val Gly Thr Arg Leu His  
85 90 95Val Thr Asn Leu Asp Gln Gly Val Thr Asn Glu Asp Ile Arg Glu Leu  
100 105 110Phe Ser Glu Ile Gly Glu Val Glu Arg Tyr Ala Ile His Tyr Asp Lys  
115 120 125Asn Gly Arg Pro Ser Gly Thr Ala Glu Val Val Tyr Pro Arg Arg Ser  
130 135 140Asp Ala Phe Gln Ala Leu Lys Lys Tyr Asn Asn Val Leu Leu Asp Gly  
145 150 155 160Arg Pro Met Arg Leu Glu Ile Leu Gly Gly Asn Asn Ser Ser Glu Ala  
165 170 175Pro Leu Ser Gly Arg Val Asn Val Asn Val Thr Gly Leu Asn Gly Arg  
180 185 190Leu Lys Arg Thr Val Val Ile Gln Gln Gly Gly Gly Gly Arg Gly Arg  
195 200 205

047-E2F-PCT.ST25.txt

Val Arg Gly Gly Arg Gly Gly Arg Gly Pro Ala Pro Thr Val Ser Arg  
210 215 220

Arg Leu Pro Ile His Asn Gln Gln Gly Gly Gly Met Arg Gly Gly Arg  
225 230 235 240

Gly Gly Phe Arg Ala Arg Gly Arg Gly Asn Gly Gly Arg Gly Arg Gly  
245 250 255

Gly Gly Arg Gly Asn Gly Lys Lys Pro Val Glu Lys Ser Ala Ala Asp  
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Leu Asp Lys Asp Leu Glu Ser Tyr His Ala Asp Ala Met Asn Thr Ser  
275 280 285

<210> 103

<211> 1452

<212> DNA

<213> Arabidopsis thaliana

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<211> 483

<212> PRT

<213> Arabidopsis thaliana

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35 40 45

Phe Ile Cys Met Gln Cys Ser Gly Ile His Arg Ser Leu Gly Val His  
50 55 60

Ile Ser Lys Val Arg Ser Ala Thr Leu Asp Thr Trp Leu Pro Glu Gln  
65 70 75 80

Val Ala Phe Ile Gln Ser Met Gly Asn Asp Lys Ala Asn Ser Tyr Trp  
85 90 95

Glu Ala Glu Leu Pro Pro Asn Tyr Asp Arg Val Gly Ile Glu Asn Phe  
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Ile Arg Ala Lys Tyr Glu Glu Lys Arg Trp Val Ser Arg Gly Glu Lys  
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047-E2F-PCT.ST25.txt

Ala Arg Ser Pro Pro Arg Val Glu Gln Glu Arg Arg Lys Ser Val Glu  
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Arg Ser Gly Pro Gly Tyr Glu His Gly His Ser Ser Ser Pro Val Asn  
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Leu Phe Glu Glu Arg Lys Thr Ile Pro Ala Ser Arg Thr Arg Asn Asn  
165 170 175

Val Ala Ala Thr Arg Ile Asn Leu Pro Val Pro Pro Gln Gly Pro Ser  
180 185 190

Gln Val Ile Lys Pro Gln Gln Lys Met Glu Ser Ala Ala Thr Pro Val  
195 200 205

Glu Arg Glu Lys Gln Ala Val Asn Val Ala Pro Ala Ser Asp Pro Pro  
210 215 220

Lys Val Asp Phe Ala Thr Asp Leu Phe Asn Met Leu Ser Met Asp Asp  
225 230 235 240

Ser Thr Thr Asn Thr Ser Glu Ala Thr Pro Gly Asp Thr Pro Ala Asp  
245 250 255

Asp Asn Ser Trp Ala Gly Phe Gln Ser Ala Gly Ser Gly Gln Thr Ala  
260 265 270

Glu Lys Ile Val Thr Ala Lys Pro Ala Glu Ser Ser Ser Pro Pro Ala  
275 280 285

Ser Ser Ser Asp Phe Glu Asp Leu Phe Lys Asp Thr Pro Asn Leu Thr  
290 295 300

Thr Gln Gln Ala Pro Lys Asp Val Lys Gly Asp Ile Met Ser Leu Phe  
305 310 315 320

Glu Lys Thr Asn Ile Val Ser Pro Phe Ala Met His Gln Gln Gln Val  
325 330 335

Ala Met Leu Ala Gln Gln Gln Ala Leu Tyr Met Ala Ala Ala Lys Ala  
340 345 350

Ala Gly Gly Thr Pro Asn Gly Val Asn Gln Gln Ala Ile Ala Asn Ala  
355 360 365

Leu Asn Val Ala Ser Ala Asn Trp Ser Asn Pro Gly Gly Tyr Gln Ile  
370 375 380

047-E2F-PCT.ST25.txt

Pro Gly Met Thr Asn Pro Val Gly Gly Gln Ala Asp Leu Gln Lys Leu  
385 390 395 400

Met Gln Asn Met Asn Met Asn Ala Asn Met Asn Thr Arg Pro Ala Gln  
405 410 415

Pro Gln Glu Asn Thr Leu Gln Tyr Pro Ser Ser Ser Phe Tyr Thr Met  
420 425 430

Gly Gln Ala Asn Gln Val Asn Gly Met Thr Pro Asn Ser Thr Gly Lys  
435 440 445

Pro Gln Ser Ser Ser Ala Thr Gln Pro Thr Ser Thr Thr Pro Ser Ser  
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Gln Ser Gly Lys Asp Phe Asp Phe Ser Ser Leu Met Asp Gly Met Phe  
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Thr Lys His

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<211> 1674

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<213> Arabidopsis thaliana

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&lt;210&gt; 106

&lt;211&gt; 557

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 106

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35 40 45

Gln Lys Glu Lys Ala Val Lys Lys Val Pro Lys Lys Val Glu Ser Ser  
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047-E2F-PCT.ST25.txt

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 Gly Thr Val 115 Ala Lys Lys Ser Lys 120 Asp Asp Ser Ser Ser 125 Asp Asp  
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 Glu Glu Ser Glu Asp Glu 230 Lys Pro Ala Gln Lys 235 Lys Ala Asp Thr Lys 240  
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 Glu Ser Glu Asp 260 Glu Glu Glu Thr Pro Lys Lys Lys Ser 270 Asp Val  
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Gly Glu Val Val Asp Val Arg Phe Ser Thr Asn Arg Asp Asp Gly Ser  
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Phe Arg Gly Phe Gly His Val Glu Phe Ala Ser Ser Glu Glu Ala Gln  
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Lys Ala Leu Glu Phe His Gly Arg Pro Leu Leu Gly Arg Glu Ile Arg  
355 360 365

Leu Asp Ile Ala Gln Glu Arg Gly Glu Arg Gly Glu Arg Pro Ala Phe  
370 375 380

Thr Pro Gln Ser Gly Asn Phe Arg Ser Gly Gly Asp Gly Gly Asp Glu  
385 390 395 400

Lys Lys Ile Phe Val Lys Gly Phe Asp Ala Ser Leu Ser Glu Asp Asn  
405 410 415

Ile Lys Asn Thr Leu Arg Glu His Phe Ser Ser Cys Gly Glu Ile Lys  
420 425 430

Asn Val Ser Val Pro Ile Asp Arg Asp Thr Gly Asn Ser Lys Gly Ile  
435 440 445

Ala Tyr Leu Glu Phe Ser Glu Gly Lys Glu Lys Ala Leu Glu Leu Asn  
450 455 460

Gly Ser Asp Met Gly Gly Gly Phe Tyr Leu Val Val Asp Glu Pro Arg  
465 470 475 480

Pro Arg Gly Asp Ser Ser Gly Gly Gly Gly Phe Gly Arg Gly Asn Gly  
485 490 495

Arg Phe Gly Ser Gly Gly Gly Arg Gly Arg Asp Gly Gly Arg Gly Arg  
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Phe Gly Ser Gly Gly Gly Arg Gly Arg Asp Gly Gly Arg Gly Arg Phe  
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Phe Thr Pro Gln Gly Lys Lys Thr Thr Phe Gly Asp Glu  
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<210> 107



&lt;211&gt; 3267

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 107

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&lt;210&gt; 108

&lt;211&gt; 1088

&lt;212&gt; PR

<213> *Arabidopsis thaliana*

&lt;400&gt; 108

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 20 25 30

Ala Leu Leu Ser Leu Leu Lys His Phe Asp Lys Val Pro Leu Glu Val  
 35 40 45

Ala Ser Thr Trp Lys Glu Asn Thr Ser Glu Thr Thr Pro Cys Asn Asn  
 50 55 60

Asn Trp Phe Gly Val Ile Cys Asp Leu Ser Gly Asn Val Val Glu Thr  
 65 70 75 80

Leu Asn Leu Ser Ala Ser Gly Leu Ser Gly Gln Leu Gly Ser Glu Ile  
 85 90 95

Gly Glu Leu Lys Ser Leu Val Thr Leu Asp Leu Ser Leu Asn Ser Phe  
 100 105 110

Ser Gly Leu Leu Pro Ser Thr Leu Gly Asn Cys Thr Ser Leu Glu Tyr  
 115 120 125

Leu Asp Leu Ser Asn Asn Asp Phe Ser Gly Glu Val Pro Asp Ile Phe  
 130 135 140

Gly Ser Leu Gln Asn Leu Thr Phe Leu Tyr Leu Asp Arg Asn Asn Leu  
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Ser Gly Leu Ile Pro Ala Ser Val Gly Gly Leu Ile Glu Leu Val Asp  
 165 170 175

Leu Arg Met Ser Tyr Asn Asn Leu Ser Gly Thr Ile Pro Glu Leu Leu  
 180 185 190

Gly Asn Cys Ser Lys Leu Glu Tyr Leu Ala Leu Asn Asn Asn Lys Leu  
 195 200 205

Asn Gly Ser Leu Pro Ala Ser Leu Tyr Leu Leu Glu Asn Leu Gly Glu  
 210 215 220

Leu Phe Val Ser Asn Asn Ser Leu Gly Gly Arg Leu His Phe Gly Ser  
 Page 165

225                      230                      240

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Leu Val Met Val Lys Cys Asn Leu Thr Gly Thr Ile Pro Ser Ser Met  
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Gly Met Leu Arg Lys Val Ser Val Ile Asp Leu Ser Asp Asn Arg Leu  
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Ser Gly Asn Ile Pro Gln Glu Leu Gly Asn Cys Ser Ser Leu Glu Thr  
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Leu Lys Leu Asn Asp Asn Gln Leu Gln Gly Glu Ile Pro Pro Ala Leu  
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Ser Lys Leu Lys Lys Leu Gln Ser Leu Glu Leu Phe Phe Asn Lys Leu  
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Ser Gly Glu Ile Pro Ile Gly Ile Trp Lys Ile Gln Ser Leu Thr Gln  
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Met Leu Val Tyr Asn Asn Thr Leu Thr Gly Glu Leu Pro Val Glu Val  
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Thr Gln Leu Lys His Leu Lys Lys Leu Thr Leu Phe Asn Asn Gly Phe  
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Tyr Gly Asp Ile Pro Met Ser Leu Gly Leu Asn Arg Ser Leu Glu Glu  
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Val Asp Leu Leu Gly Asn Arg Phe Thr Gly Glu Ile Pro Pro His Leu  
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Cys His Gly Gln Lys Leu Arg Leu Phe Ile Leu Gly Ser Asn Gln Leu  
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His Gly Lys Ile Pro Ala Ser Ile Arg Gln Cys Lys Thr Leu Glu Arg  
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Val Arg Leu Glu Asp Asn Lys Leu Ser Gly Val Leu Pro Glu Phe Pro  
465                                   470                      475                      480

Glu Ser Leu Ser Leu Ser Tyr Val Asn Leu Gly Ser Asn Ser Phe Glu  
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Gly Ser Ile Pro Arg Ser Leu Gly Ser Cys Lys Asn Leu Leu Thr Ile  
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Asp Leu Ser Gln Asn Lys Leu Thr Gly Leu Ile Pro Pro Glu Leu Gly  
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Asn Leu Gln Ser Leu Gly Leu Leu Asn Leu Ser His Asn Tyr Leu Glu  
530 535 540

Gly Pro Leu Pro Ser Gln Leu Ser Gly Cys Ala Arg Leu Leu Tyr Phe  
545 550 555 560

Asp Val Gly Ser Asn Ser Leu Asn Gly Ser Ile Pro Ser Ser Phe Arg  
565 570 575

Ser Trp Lys Ser Leu Ser Thr Leu Val Leu Ser Asp Asn Asn Phe Leu  
580 585 590

Gly Ala Ile Pro Gln Phe Leu Ala Glu Leu Asp Arg Leu Ser Asp Leu  
595 600 605

Arg Ile Ala Arg Asn Ala Phe Gly Gly Lys Ile Pro Ser Ser Val Gly  
610 615 620

Leu Leu Lys Ser Leu Arg Tyr Gly Leu Asp Leu Ser Ala Asn Val Phe  
625 630 635 640

Thr Gly Glu Ile Pro Thr Thr Leu Gly Ala Leu Ile Asn Leu Glu Arg  
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Ser Leu Lys Ser Leu Asn Gln Val Asp Val Ser Tyr Asn Gln Phe Thr  
675 680 685

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Trp Val Arg Ser Val Leu Ser Ser Tyr Glu Asp Glu Asp Asp Thr  
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1040 1045 1050

Arg Cys Thr Asp Lys Arg Pro Glu Asn Arg Pro Ser Met Arg Asp  
1055 1060 1065

Val Val Lys Asp Leu Thr Asp Leu Glu Ser Phe Val Arg Ser Thr  
1070 1075 1080

Ser Gly Ser Val His  
1085

<210> 109

<211> 1083

<212> DNA

<213> Arabidopsis thaliana

<400> 109  
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gattcaagga acaatgatgg tcctgccaat gaaaacggat atggtggagg ctacagacgc 300  
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cgtggaagct acagcaatgg tggtgattca ggtgactctg aaagaccacg caagaactat 420  
gaccgtcaca gtgaacacgc gtacgggaat gaggataaac gtgatggagc tggccgtgcg 480  
aattggggaa ccactcagga tgatattact ccggtgactg aagaatccac agctgttggtg 540  
gacaagaatt tgactgttga gaagcaagat ggtgaagggtg aagcaactga tgcaagaat 600  
gaaacacctg ctgagaaagc agaggaaaag cctgaggaca aggagatgac ttggaagag 660

tatgagaagg ttttgagga gaagaagaaa gctctgcagg cgaccaaggt tgaggaaagg 720  
aagggtgaca ctaaagcatt tgaggccatg caacagctct caagcaaaaa gagcaacaac 780  
gatgaagtct tcatcaaaact gggaacagag aaggacaagc gcattactga gagagaagag 840  
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cagaggggacg gtggaagaaa cctgagggaa ggaggagaa accagagggga cggaggagct 1020  
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<210> 110

<211> 360

<212> PRT

<213> Arabidopsis thaliana

<400> 110

Met Ala Ser Val Asn Pro Phe Asp Leu Leu Asp Asp Ala Glu Asp  
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Pro Ser Gln Ile Val Ala Ser Lys Pro Leu Lys Val Val Ala Pro Val  
20 25 30

Gln Thr Ala Lys Ser Gly Lys Met Pro Thr Lys Pro Pro Pro Ser  
35 40 45

Gln Ala Val Arg Glu Ala Arg Asn Ala Pro Gly Gly Gly Arg Gly Ala  
50 55 60

Gly Arg Gly Gly Ser Tyr Gly Arg Gly Gly Arg Gly Gly Asn Asn Arg  
65 70 75 80

Asp Ser Arg Asn Asn Asp Gly Pro Ala Asn Glu Asn Gly Tyr Gly Gly  
85 90 95

Gly Tyr Arg Arg Ser Glu Glu Gly Asp Gly Ala Arg Arg Gly Gly Pro  
100 105 110

Val Gly Gly Tyr Arg Gly Asp Arg Arg Gly Ser Tyr Ser Asn Gly Gly  
115 120 125

Asp Ser Gly Asp Ser Glu Arg Pro Arg Lys Asn Tyr Asp Arg His Ser  
130 135 140



Arg Thr Ala Tyr Gly Asn Glu Asp Lys Arg Asp Gly Ala Gly Arg Ala  
 145 150 155 160  
 Asn Trp Gly Thr Thr Gln Asp Asp Ile Thr Pro Val Thr Glu Glu Ser  
 165 170 175  
 Thr Ala Val Val Asp Lys Asn Leu Thr Val Glu Lys Gln Asp Gly Glu  
 180 185 190  
 Gly Glu Ala Thr Asp Ala Lys Asn Glu Thr Pro Ala Glu Lys Ala Glu  
 195 200 205  
 Glu Lys Pro Glu Asp Lys Glu Met Thr Leu Glu Glu Tyr Glu Lys Val  
 210 215 220  
 Leu Glu Glu Lys Lys Lys Ala Leu Gln Ala Thr Lys Val Glu Glu Arg  
 225 230 235 240  
 Lys Val Asp Thr Lys Ala Phe Glu Ala Met Gln Gln Leu Ser Ser Lys  
 245 250 255  
 Lys Ser Asn Asn Asp Glu Val Phe Ile Lys Leu Gly Thr Glu Lys Asp  
 260 265 270  
 Lys Arg Ile Thr Glu Arg Glu Glu Lys Thr Arg Lys Ser Leu Ser Ile  
 275 280 285  
 Asn Glu Phe Leu Lys Pro Ala Asp Gly Lys Ser Tyr Tyr Arg Pro Arg  
 290 295 300  
 Gly Gly Tyr Gln Gly Gly Arg Glu Gly Arg Gly Pro Arg Glu Gly Asn  
 305 310 315 320  
 Gln Arg Asp Gly Gly Arg Asn Leu Arg Glu Gly Gly Arg Asn Gln Arg  
 325 330 335  
 Asp Gly Gly Ala Ala Ala Gln Ala Pro Thr Pro Ala Ile Gly Asp Ser  
 340 345 350  
 Ala Gln Phe Pro Thr Leu Gly Lys  
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&lt;210&gt; 111

&lt;211&gt; 1779

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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<400> 111
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1779

&lt;210&gt; 112

&lt;211&gt; 592

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 112

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1 5 10 15Arg Ser Val Thr Pro Lys Arg Arg Ser Pro Thr Pro Lys Arg Tyr Lys  
20 25 30Arg Gln Lys Ser Arg Ser Ser Thr Pro Ser Pro Ala Lys Arg Ser Pro  
35 40 45Ala Ala Thr Leu Glu Ser Ala Lys Asn Arg Asn Gly Glu Lys Leu Lys  
50 55 60Arg Glu Glu Glu Glu Arg Lys Arg Arg Gln Arg Glu Ala Glu Leu Lys  
65 70 75 80Leu Ile Glu Glu Glu Thr Val Lys Arg Val Glu Glu Ala Ile Arg Lys  
85 90 95Lys Val Glu Glu Ser Leu Gln Ser Glu Lys Ile Lys Met Glu Ile Leu  
100 105 110Thr Leu Leu Glu Glu Gly Arg Lys Arg Leu Asn Glu Glu Val Ala Ala  
115 120 125Gln Leu Glu Glu Glu Lys Glu Ala Ser Leu Ile Glu Ala Lys Glu Lys  
130 135 140Glu Glu Arg Glu Gln Gln Glu Lys Glu Glu Arg Glu Arg Ile Ala Glu  
145 150 155 160Glu Asn Leu Lys Arg Val Glu Glu Ala Gln Arg Lys Glu Ala Met Glu  
165 170 175Arg Gln Arg Lys Glu Glu Glu Arg Tyr Arg Glu Leu Glu Glu Leu Gln  
180 185 190

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Arg Gln Lys Glu Glu Ala Met Arg Arg Lys Lys Ala Glu Glu Glu  
195 200 205

Glu Arg Leu Lys Gln Met Lys Leu Leu Gly Lys Asn Lys Ser Arg Pro  
210 215 220

Lys Leu Ser Phe Ala Leu Ser Ser Lys Met Thr Thr Met Ser Asp Leu  
225 230 235 240

Asp Glu Ile Met Val Ala Glu Ile Leu Cys Arg Thr Pro Met Thr Cys  
245 250 255

Leu Lys Thr Val Arg Ser Val Cys Lys Lys Trp Asn Ala Leu Ser Lys  
260 265 270

Lys Trp Phe Phe Phe Gly Lys Ala Lys Gln Phe Leu Gly Phe Met Met  
275 280 285

Met Asp Ser Arg Val Cys Ser Leu Arg Phe Asp Leu Arg Lys Asp Leu  
290 295 300

Val Val Glu Pro Pro Ser Ile Lys Gln Val Ser Ile Leu Asp Gln Ile  
305 310 315 320

Glu Val Ser Lys Ile Phe His Ser Asp Gly Leu Leu Leu Cys Ile Ile  
325 330 335

Lys Asn Asp Thr Thr Arg Leu Leu Val Trp Asn Pro Tyr Leu Glu Gln  
340 345 350

Thr Arg Trp Ile Gln Pro Arg His Asn Phe His Ile Leu Asp Cys Tyr  
355 360 365

Ala Ile Gly His Asp Lys Asn Arg Lys His Lys Ile Leu Arg Phe Val  
370 375 380

Asp Asp Phe Leu Pro Val Glu Asn Val Val Phe Gly Gly Asn Thr Tyr  
385 390 395 400

Phe Phe Ala Lys Glu Arg Tyr Ile Phe Glu Gly Lys Gly Pro Glu Glu  
405 410 415

Ile Asp Ile Thr Glu Thr Glu Asp Phe Leu Leu Cys Phe Asp Phe Thr  
420 425 430

Ala Glu Arg Phe Gly Pro Arg Leu Pro Leu Pro Phe His Ser Tyr Tyr  
435 440 445

047-E2F-PCT.ST25.txt

Ala Glu Thr Val Thr Leu Ser Cys Val Lys Glu Asp Gln Leu Ser Val  
450 455 460

Leu Cys Gln Arg Gln Pro Ser Glu Pro Ser Glu Ile Leu Glu Ile Trp  
465 470 475 480

Val Ser Thr Asn Ile Gln Pro Asn Ala Val Ser Trp Ser Ile Phe Leu  
485 490 495

Lys Val Asp Met Arg Pro Leu Thr Gly Phe Gln Phe Asn Asp Met Ala  
500 505 510

Gly Ser Phe Phe Ile Asp Gln Glu Asn Lys Val Ala Val Val Phe Asp  
515 520 525

Leu Asp Pro Ser Gln Ile Cys Arg Tyr Gln Thr Ala Tyr Ile Ile Gly  
530 535 540

Gln Glu Tyr Gly Gly Tyr Phe Asn Ser Val Asn Ile Gly Glu Val Pro  
545 550 555 560

Asn Leu Trp Ile Pro Gly Ser Val Gly Tyr Ala Asp Thr Thr Ser Cys  
565 570 575

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580 585 590

<210> 113

<211> 396

<212> DNA

<213> Arabidopsis thaliana

<400> 113  
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gatgtgacaa ttgctaattg aggagtgatg cctaacatcc acaatctcct tctccccaag 360  
aaggctggtt catctaagcc tactgaagaa gattag 396

&lt;210&gt; 114

&lt;211&gt; 131

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 114

Met Ala Gly Arg Gly Lys Gln Leu Gly Ser Gly Ala Ala Lys Lys Ser  
1 5 10 15Thr Ser Arg Ser Lys Ala Gly Leu Gln Phe Pro Val Gly Arg Ile  
20 25 30Ala Arg Phe Leu Lys Ala Gly Lys Tyr Ala Glu Arg Val Gly Ala Gly  
35 40 45Ala Pro Val Tyr Leu Ala Ala Val Leu Glu Tyr Leu Ala Ala Glu Val  
50 55 60Leu Glu Leu Ala Gly Asn Ala Ala Arg Asp Asn Lys Lys Thr Arg Ile  
65 70 75 80Val Pro Arg His Ile Gln Leu Ala Val Arg Asn Asp Glu Glu Leu Ser  
85 90 95Lys Leu Leu Gly Asp Val Thr Ile Ala Asn Gly Gly Val Met Pro Asn  
100 105 110Ile His Asn Leu Leu Leu Pro Lys Lys Ala Gly Ser Ser Lys Pro Thr  
115 120 125Glu Glu Asp  
130

&lt;210&gt; 115

&lt;211&gt; 1458

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

<400> 115  
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047-E2F-PCT.ST25.txt

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aggtggtttg atgaatcaat gttggattgc tgcgaacctc tggaagttagt gaaggaaaaa 300
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<210> 116

<211> 485

<212> PRT

<213> Arabidopsis thaliana

<400> 116

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Ile Asp Phe Ser Ser Ala Glu Gly Lys Leu Ile Phe Asn Glu Ala Leu  
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Gln Lys Gly Thr Met Glu Gly Phe Phe Arg Leu Ile Ser Tyr Phe Gln  
35 40 45

Thr Gln Ser Glu Pro Ala Tyr Cys Gly Leu Ala Ser Leu Ser Val Val  
50 55 60

Leu Asn Ala Leu Ser Ile Asp Pro Gly Arg Lys Trp Lys Gly Pro Trp  
65 70 75 80

Arg Trp Phe Asp Glu Ser Met Leu Asp Cys Glu Pro Leu Glu Val  
85 90 95

Val Lys Glu Lys Gly Ile Ser Phe Gly Lys Val Val Cys Leu Ala His  
100 105 110

Cys Ser Gly Ala Lys Val Glu Ala Phe Arg Thr Ser Gln Ser Thr Ile  
115 120 125

Asp Asp Phe Arg Lys Phe Val Val Lys Cys Thr Ser Ser Glu Asn Cys  
130 135 140

His Met Ile Ser Thr Tyr His Arg Gly Val Phe Lys Gln Thr Gly Thr  
145 150 155 160

Gly His Phe Ser Pro Ile Gly Gly Tyr Asn Ala Glu Arg Asp Met Ala  
165 170 175

Leu Ile Leu Asp Val Ala Arg Phe Lys Tyr Pro Pro His Trp Val Pro  
180 185 190

Leu Lys Leu Leu Trp Glu Ala Met Asp Ser Ile Asp Gln Ser Thr Gly  
195 200 205

Lys Arg Arg Gly Phe Met Leu Ile Ser Arg Pro His Arg Glu Pro Gly  
210 215 220

Leu Leu Tyr Thr Leu Ser Cys Lys Asp Glu Ser Trp Ile Glu Ile Ala  
225 230 235 240

Lys Tyr Leu Lys Glu Asp Val Pro Arg Leu Val Ser Ser Gln His Val  
245 250 255

Asp Ser Val Glu Lys Ile Ile Ser Val Val Phe Lys Ser Leu Pro Ser  
260 265 270



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Asn Phe Asn Gln Phe Ile Arg Trp Val Ala Glu Ile Arg Ile Thr Glu  
275 280 285

Asp Ser Asn Gln Asn Leu Ser Ala Glu Glu Lys Ser Arg Leu Lys Leu  
290 295 300

Lys Gln Leu Val Leu Lys Glu Val His Glu Thr Glu Leu Phe Lys His  
305 310 315 320

Ile Asn Lys Phe Leu Ser Thr Val Gly Tyr Glu Asp Ser Leu Thr Tyr  
325 330 335

Ala Ala Ala Lys Ala Cys Cys Gln Gly Ala Glu Ile Leu Ser Gly Ser  
340 345 350

Pro Ser Lys Glu Phe Cys Cys Arg Glu Thr Cys Val Lys Cys Ile Lys  
355 360 365

Gly Pro Asp Asp Ser Glu Gly Thr Val Val Thr Gly Val Val Val Arg  
370 375 380

Asp Gly Asn Glu Gln Lys Val Asp Leu Leu Val Pro Ser Thr Gln Thr  
385 390 395 400

Glu Cys Glu Cys Gly Pro Glu Ala Thr Tyr Pro Ala Gly Asn Asp Val  
405 410 415

Phe Thr Ala Leu Leu Leu Ala Leu Pro Pro Gln Thr Trp Ser Gly Ile  
420 425 430

Lys Asp Gln Ala Leu Met His Glu Met Lys Gln Leu Ile Ser Met Ala  
435 440 445

Ser Leu Pro Thr Leu Leu Gln Glu Glu Val Leu His Leu Arg Arg Gln  
450 455 460

Leu Gln Leu Leu Lys Arg Cys Gln Glu Asn Lys Glu Glu Asp Asp Leu  
465 470 475 480

Ala Ala Pro Ala Tyr  
485

<210> 117

<211> 1029

<212> DNA

<213> *Arabidopsis thaliana*

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<400> 117
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cacctcgtct ctatcttcgc ttctccgcc ctcaaatgct catccccgc cgagtaccgc 180
tcgcgtttcg ttagaaacgt tgctgtatct tcggattttg aggtggagga agatgatatg 240
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caattttga 1029

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&lt;210&gt; 118

&lt;211&gt; 342

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 118

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Met Ser Ala Ser Ala Ser Ser Leu Ser Ala Phe Asn Pro Lys Ser Leu
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Pro Leu Cys Val Ser Arg Pro Ala Ser Val Ser Val Leu Pro Pro Ser
20      25      30

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Leu Ser Phe Lys Leu His Ser Asp His Leu Val Ser Ile Phe Ala Ser  
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       50                          55                          60  
 Arg Asn Val Ala Val Ser Ser Asp Phe Glu Val Glu Glu Asp Asp Met  
   65                          70                          75                          80  
 Phe Ala Asp Gly Asp Asp Ser Ala Pro Val Glu Arg Asn Ser Phe Ser  
           85                          90                          95  
 Pro Asp Leu Lys Leu Phe Val Gly Asn Leu Ser Phe Asn Val Asp Ser  
          100                         105                         110  
 Ala Gln Leu Ala Gln Leu Phe Glu Ser Ala Gly Asn Val Glu Met Val  
       115                         120                         125  
 Glu Val Ile Tyr Asp Lys Val Thr Gly Arg Ser Arg Gly Phe Gly Phe  
   130                         135                         140  
 Val Thr Met Ser Thr Ala Ala Glu Val Glu Ala Ala Ala Gln Gln Phe  
   145                         150                         155                         160  
 Asn Gly Tyr Glu Phe Glu Gly Arg Pro Leu Arg Val Asn Ala Gly Pro  
          165                         170                         175  
 Pro Pro Pro Lys Arg Glu Glu Ser Phe Ser Arg Gly Pro Arg Ser Gly  
          180                         185                         190  
 Gly Tyr Gly Ser Glu Arg Gly Gly Tyr Gly Ser Glu Arg Gly Gly  
       195                         200                         205  
 Gly Tyr Gly Ser Glu Arg Gly Gly Tyr Gly Ser Glu Arg Gly Gly  
       210                         215                         220  
 Gly Tyr Gly Ser Gln Arg Ser Gly Gly Tyr Gly Gly Ser Gln Arg  
   225                         230                         235                         240  
 Ser Ser Tyr Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser Gly Ser Gly  
          245                         250                         255  
 Asn Arg Leu Tyr Val Gly Asn Leu Ser Trp Gly Val Asp Asp Met Ala  
          260                         265                         270  
 Leu Glu Asn Leu Phe Asn Glu Gln Gly Lys Val Val Glu Ala Arg Val  
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Ile Tyr Asp Arg Asp Ser Gly Arg Ser Lys Gly Phe Gly Phe Val Thr  
290 295 300

Leu Ser Ser Ser Gln Glu Val Gln Lys Ala Ile Asn Ser Leu Asn Gly  
305 310 315 320

Ala Asp Leu Asp Gly Arg Gln Ile Arg Val Ser Glu Ala Glu Ala Arg  
325 330 335

Pro Pro Arg Gly Gln Phe  
340

<210> 119

<211> 1467

<212> DNA

<213> Arabidopsis thaliana

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gcaagttcca tgcaaacgagc tatcgaggca tcacctgtca tgctcaatgg acacaaagtt 1140  
 gttgtggagg aaaagcgatc taccgcaaga ggaactata gaggacgttc gacgtttggt 1200  
 gtaaacacag gctacagaaa cgaaggagga aggggtcgtg ggagctttgg aggtggaaga 1260  
 ggaggatag gccggaccga tttcaacgga tatggttaata acaggggaaa caatagaggc 1320  
 ggatacgc aaaccgagcaaa tggatgatggt ggtgggttcc cgagggccaa tggtaacaat 1380  
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<210> 120

<211> 488

<212> PRT

<213> Arabidopsis thaliana

<400> 120

Met Ala Met Leu Gly Ala Gln Gln Val Pro Ala Ala Ala Cys Thr Pro  
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Asp Met Val Gly Asn Ala Phe Val Pro Gln Tyr Tyr His Ile Leu His  
 20 25 30

Gln Ser Pro Glu His Val His Arg Phe Tyr Gln Glu Ile Ser Lys Leu  
 35 40 45

Gly Arg Pro Glu Glu Asn Gly Leu Met Ser Ile Thr Ser Thr Leu Gln  
 50 55 60

Ala Ile Asp Lys Lys Ile Met Ala Leu Gly Tyr Gly Val Ile Ser Ala  
 65 70 75 80

Glu Ile Ala Thr Val Asp Thr Gln Glu Ser His Gly Gly Tyr Ile  
 85 90 95

Val Leu Val Thr Gly Tyr Leu Thr Gly Lys Asp Ser Val Arg Arg Thr  
 100 105 110

Phe Ser Gln Thr Phe Phe Leu Ala Pro Gln Glu Thr Gly Tyr Phe Val  
 115 120 125

Leu Asn Asp Met Phe Arg Phe Ile Asp Glu Gly Thr Val Val His Gly  
 130 135 140

047-E2F-PCT.ST25.txt

Asn Gln Ile Pro Val Asn Asn Val Gln Ala Pro Val Asn Thr Tyr Gln  
 145 150 155  
 Asp Thr Ala Ala Ala Lys Glu Ile Pro Asp Asp Phe Val Gln Glu Lys  
 165 170  
 Tyr Val Gln Glu Asn His Ala Val Lys Gln Thr Glu Val Leu Ser Lys  
 180 185  
 Ser Ile Asn Glu Pro Glu Lys Val Phe Thr Pro Ser Glu Asp Glu Gln  
 195 200 205  
 Val Ser Ala Ala Glu Glu Ala Leu Val Thr Glu Thr Val Asn Glu Ala  
 210 215 220  
 Pro Ile Glu Val Gln Lys Val Gly Glu Ser Asp Ser Arg Thr Gly Glu  
 225 230 235 240  
 Ile Pro Lys Arg Ser Tyr Ala Ser Ile Val Lys Val Met Lys Glu Asn  
 245 250 255  
 Ala Ala Pro Met Ser Ala Ser Arg Thr Pro Thr Lys Val Glu Pro Lys  
 260 265 270  
 Lys Gln Glu Asp Gln Ala Ile His Ile Pro Leu Pro Thr Pro Leu Ser  
 275 280 285  
 Glu Lys Ser Asp Ser Gly Ala Asn Val Ala Val Asn Glu Asn Asn Gln  
 290 295 300  
 Glu Asn Glu Arg Ala Leu Gly Pro Ser Ile Tyr Leu Lys Gly Leu Pro  
 305 310 315 320  
 Leu Asp Ala Thr Pro Ala Leu Leu Glu Asn Glu Phe Gln Lys Phe Gly  
 325 330 335  
 Leu Ile Arg Thr Asn Gly Ile Gln Val Arg Ser Gln Lys Gly Phe Cys  
 340 345 350  
 Phe Gly Phe Val Glu Phe Glu Ser Ala Ser Ser Met Gln Ser Ala Ile  
 355 360 365  
 Glu Ala Ser Pro Val Met Leu Asn Gly His Lys Val Val Val Glu Glu  
 370 375 380  
 Lys Arg Ser Thr Ala Arg Gly Asn Tyr Arg Gly Arg Ser Thr Phe Gly  
 385 390 395 400

Val Asn Thr Gly Tyr Arg Asn Glu Gly Gly Arg Gly Arg Gly Ser Phe  
 405 410 415

Gly Gly Gly Arg Gly Gly Tyr Gly Arg Thr Asp Phe Asn Gly Tyr Gly  
 420 425 430

Asn Asn Arg Gly Asn Asn Arg Gly Gly Tyr Ala Asn Arg Ala Asn Gly  
 435 440 445

Asp Gly Gly Gly Phe Pro Arg Ala Asn Gly Asn Asn Gly Arg Val Arg  
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Arg Gly Gly Gly Asn Asp Ala Asn Arg Ala Thr Lys Pro Val Asp Asp  
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Ala Pro Arg Val Ser Val Ala Ala  
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<210> 121

<211> 1173

<212> DNA

<213> Arabidopsis thaliana

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 ccgcagcctt tgcaggttcg gattcgaatc atctgcaccg cgttatgtca cagtgcagtc 180  
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 ataggcgtag tggaaagtgt tggtgaaaat gtgaaggaag tggtagaagg agacaccgta 300  
 ctaccaacgt tcatgcctga ctgtggtgac tgtgttgatt gcaaatctca caaaagcaac 360  
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<210> 122

<211> 390

<212> PRT

<213> Arabidopsis thaliana

<400> 122

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20 25 30

Met Glu Glu Ile Met Val Ala Pro Pro Gln Pro Phe Glu Val Arg Ile  
35 40 45

Arg Ile Ile Cys Thr Ala Leu Cys His Ser Asp Val Thr Phe Trp Lys  
50 55 60

Leu Gln Val Pro Pro Ala Cys Phe Pro Arg Ile Leu Gly His Glu Ala  
65 70 75 80

Ile Gly Val Val Glu Ser Val Gly Glu Asn Val Lys Glu Val Val Glu  
85 90 95

Gly Asp Thr Val Leu Pro Thr Phe Met Pro Asp Cys Gly Asp Cys Val  
100 105 110

Asp Cys Lys Ser His Lys Ser Asn Leu Cys Ser Lys Phe Pro Phe Lys  
115 120 125

Val Ser Pro Trp Met Pro Arg Tyr Asp Asn Ser Ser Arg Phe Thr Asp  
130 135 140



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Leu Asn Gly Glu Thr Leu Phe His Phe Leu Asn Val Ser Ser Phe Ser  
 145 150 155 160  
 Glu Tyr Thr Val Leu Asp Val Ala Asn Val Val Lys Ile Asp Ser Ser  
 165 170 175  
 Ile Pro Pro Ser Arg Ala Cys Leu Leu Ser Cys Gly Val Ser Thr Gly  
 180 185 190  
 Val Gly Ala Ala Trp Glu Thr Ala Lys Val Glu Lys Gly Ser Thr Val  
 195 200 205  
 Val Ile Phe Gly Leu Gly Ser Ile Gly Leu Ala Val Ala Glu Gly Ala  
 210 215 220  
 Arg Leu Cys Gly Ala Ser Arg Ile Ile Gly Val Asp Ile Asn Pro Thr  
 225 230 235 240  
 Lys Phe Gln Val Gly Gln Lys Phe Gly Val Thr Glu Phe Val Asn Ser  
 245 250 255  
 Met Thr Cys Glu Lys Asn Arg Val Ser Glu Val Ile Asn Glu Met Thr  
 260 265 270  
 Asp Gly Gly Ala Asp Tyr Cys Phe Glu Cys Val Gly Ser Ser Ser Leu  
 275 280 285  
 Val Gln Glu Ala Tyr Ala Cys Cys Arg Gln Gly Trp Gly Lys Thr Ile  
 290 295 300  
 Thr Leu Gly Val Asp Lys Pro Gly Ser Gln Ile Cys Leu Asp Ser Phe  
 305 310 315 320  
 Asp Val Leu His His Gly Lys Ile Leu Met Gly Ser Leu Phe Gly Gly  
 325 330 335  
 Leu Lys Ala Lys Thr His Ile Pro Ile Leu Leu Lys Arg Tyr Leu Ser  
 340 345 350  
 Asn Glu Leu Glu Leu Asp Lys Phe Val Thr His Glu Met Lys Phe Glu  
 355 360 365  
 Glu Ile Asn Asp Ala Phe Gln Leu Leu Leu Glu Gly Lys Cys Ile Arg  
 370 375 380  
 Cys Val Leu Trp Met Gly  
 385 390

&lt;210&gt; 123

&lt;211&gt; 702

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 123

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aatggaggcg ttttcccccg ccacgacgct aaatctaagg ttgatgtccc ggtggagaag      180
ccaccgaagt tctatccagc tgaagacgtg aagaaacctc tccccacag gcgcacggca      240
aaaccagcca agctcagagc tagcatcact ccagggcagc tgcttatcat ccttgctggt      300
agatttaagg gcaagagagt tgtcttcctt aagcagcttg cctccggttt gcttcttggt      360
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ggtacttcca caaaggttga catttctgga gttaccctcg acaaattcga tgataagtac      480
ttcggcaagg ttgctgagaa gaaaaagaag aagactgaag gagagtctct cgaggctgag      540
aaagaggaga agaagagatg tccacaggga aagaagatg accagaaagc cgtggacgca      600
gctttgatca aagctattga agcagttcca gagttgaaga cttacctcgg agcaagggtt      660
tcattgaaac aaggaatgaa gccccatgag cttgttttct ag                          702

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&lt;210&gt; 124

&lt;211&gt; 233

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 124

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Met Pro Ala Lys  Gln Arg Thr Ala Lys  Val Asn Arg Asn Pro  Asp Leu
 1              5              10              15

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Ile Arg Gly Val  Gly Lys Tyr Ser  Arg Ser Gln Met Tyr  His Lys Arg
      20              25              30

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```

Gly Leu Trp Ala Ile Lys Ala Lys  Asn Gly Gly Val  Phe Pro Arg His
      35              40              45

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Asp Ala Lys Ser Lys Val  Asp Ala Pro Val Glu Lys  Pro Pro Lys Phe
      50              55              60

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Tyr Pro Ala Glu Asp Val Lys Lys Pro Leu Pro Asn Arg Arg Thr Ala  
65 70 75 80

Lys Pro Ala Lys Leu Arg Ala Ser Ile Thr Pro Gly Thr Val Leu Ile  
85 90 95

Ile Leu Ala Gly Arg Phe Lys Gly Lys Arg Val Val Phe Leu Lys Gln  
100 105 110

Leu Ala Ser Gly Leu Leu Leu Val Thr Gly Pro Phe Lys Ile Asn Gly  
115 120 125

Val Pro Leu Arg Arg Val Asn Gln Ala Tyr Val Ile Gly Thr Ser Thr  
130 135 140

Lys Val Asp Ile Ser Gly Val Thr Leu Asp Lys Phe Asp Asp Lys Tyr  
145 150 155 160

Phe Gly Lys Val Ala Glu Lys Lys Lys Lys Lys Thr Glu Gly Glu Phe  
165 170 175

Phe Glu Ala Glu Lys Glu Glu Lys Lys Glu Ile Pro Gln Gly Lys Lys  
180 185 190

Asp Asp Gln Lys Ala Val Asp Ala Ala Leu Ile Lys Ala Ile Glu Ala  
195 200 205

Val Pro Glu Leu Lys Thr Tyr Leu Gly Ala Arg Phe Ser Leu Lys Gln  
210 215 220

Gly Met Lys Pro His Glu Leu Val Phe  
225 230

<210> 125

<211> 1944

<212> DNA

<213> Arabidopsis thaliana

<400> 125  
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gcaaagcttc acattgttgt gcttgagggt gactttaaca ctgaagatga tgaagactgg	480
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ccagaagatg gatatacttt cccatcgttt ctacacacgc ctatgcaagg ttatgatgaa	1800
gaccgtggct gatcaggcag agctgttgtt ggatggccta agataaaagc cgcaatgaga	1860
tgggggttct tcatacaggag gaaagctgct gagaggcgag cacaattgtg agagcttgat	1920
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&lt;211&gt; 647

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 126

Met Met Asp Ser Gly Asn Asn Asn Met Asn Arg Ala Lys Arg Asn Leu  
 1 5 10 15

Asp Gly Asn Asp Asp Asp Gln Pro Glu Arg Lys Arg Pro Ala Phe Ala  
 20 25 30

Ser Val Ile Val Glu Ala Leu Lys Val Asp Ser Leu Gln Lys Leu Cys  
 35 40 45

Ser Ser Leu Glu Pro Ile Leu Arg Arg Val Val Ser Glu Glu Leu Glu  
 50 55 60

Arg Ala Leu Ala Lys Leu Gly Pro Ala Arg Leu Thr Gly Ser Ser Gly  
 65 70 75 80

Ser Ser Pro Lys Arg Ile Glu Gly Pro Asp Gly Arg Lys Leu Gln Leu  
 85 90 95

His Phe Lys Ser Arg Leu Ser Leu Pro Leu Phe Thr Gly Gly Lys Val  
 100 105 110

Glu Gly Glu Gln Gly Ala Val Ile His Val Val Leu Ile Asp Ala Asn  
 115 120 125

Thr Gly Arg Ala Val Val Tyr Gly Pro Glu Ala Ser Ala Lys Leu His  
 130 135 140

Ile Val Val Leu Glu Gly Asp Phe Asn Thr Glu Asp Asp Glu Asp Trp  
 145 150 155 160

Thr Gln Glu Glu Phe Glu Ser His Val Val Lys Glu Arg Ser Gly Lys  
 165 170 175

Arg Pro Leu Leu Thr Gly Glu Val Tyr Val Thr Leu Lys Glu Gly Val  
 180 185 190

Gly Thr Leu Gly Glu Leu Val Phe Thr Asp Asn Ser Ser Trp Ile Arg  
 195 200 205

Ser Arg Lys Phe Arg Leu Gly Leu Arg Val Val Ser Gly Cys Cys Asp  
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210

215

Gly Met Arg Ile Arg Glu Ala Lys Thr Glu Ala Phe Val Val Lys Asp  
225 230 235 240

His Arg Gly Glu Leu Tyr Lys Lys His Tyr Pro Pro Ala Leu Asn Asp  
245 250 255

Asp Val Trp Arg Leu Asp Lys Ile Gly Lys Asp Gly Ala Phe His Lys  
260 265 270

Lys Leu Thr Ala Glu Gly Ile Asn Thr Val Glu Asp Phe Leu Arg Val  
275 280 285

Met Val Lys Asp Ser Pro Lys Leu Arg Thr Ile Leu Gly Ser Gly Met  
290 295 300

Ser Asn Lys Met Trp Asp Ala Leu Val Glu His Ala Lys Thr Cys Val  
305 310 315 320

Gln Ser Ser Lys Leu Tyr Ile Tyr Tyr Ala Glu Asp Ser Arg Asn Val  
325 330 335

Gly Val Val Phe Asn Asn Ile Tyr Glu Leu Ser Gly Leu Ile Ser Gly  
340 345 350

Asp Gln Tyr Phe Ser Ala Asp Ser Leu Thr Asp Ser Gln Lys Val Tyr  
355 360 365

Val Glu Gly Leu Val Lys Lys Ala Tyr Glu Asn Trp Asn Leu Val Ile  
370 375 380

Glu Tyr Asp Gly Lys Ser Leu Leu Asp Leu Lys Gln Pro Gln Arg Leu  
385 390 395 400

Ser Ile Thr His Thr Asn Leu Glu Asn Tyr Ser Thr Ala Ala Ile Asp  
405 410 415

His Pro Met Gln Met Val Ala Gly His Ser Ser Ser Met Pro Pro Asn  
420 425 430

Gln Ser Pro Val Leu Ser Asp Phe Ala Ile Gly Gly Tyr Asp Gln Thr  
435 440 445

Leu Ala Thr Arg Tyr His Ser His Pro Gln Leu Leu Asn Ser Asn Pro  
450 455 460

Arg Ala Gln Phe Glu Val Ala Ser Cys Ser Thr Ser Gln Asp Gln Phe  
465 470 475 480

Met Gly Asn Leu His Gln Thr Gln Ser Thr Ile Asn Asn Gln His Met  
485 490 495

Asn Gly Leu Ala Leu Gly Pro Ser Gln Ser Ser Thr Ser Gly Tyr Gln  
500 505 510

Asn Ile Asn Pro Ser Ser Val His Gln Ala Asp Leu Asn His Leu Glu  
515 520 525

Asp Trp Ser Asn Pro Arg Glu Arg Gly Pro Asp Asp Phe Phe Ser Glu  
530 535 540

Glu Glu Ile Arg Leu Arg Ser His Glu Met Leu Glu Ser Glu Asp Met  
545 550 555 560

Gln Gln Phe Leu Arg Leu Phe Ser Met Gly Gly Gly Gly Asn Gly Ser  
565 570 575

Ala Thr His Leu Pro Glu Asp Gly Tyr Thr Phe Pro Ser Phe Leu His  
580 585 590

Thr Pro Met Gln Gly Tyr Asp Glu Asp Arg Gly Arg Ser Gly Arg Ala  
595 600 605

Val Val Gly Trp Leu Lys Ile Lys Ala Ala Met Arg Trp Gly Phe Phe  
610 615 620

Ile Arg Arg Lys Ala Ala Glu Arg Arg Ala Gln Ile Val Glu Leu Asp  
625 630 635 640

Asp Asp Asp Glu Asp Gly Glu  
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<210> 127

<211> 1107

<212> DNA

<213> *Arabidopsis thaliana*

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accggcggcg agaacattga aaacgaagcc tcgtgttgct attgtgacct caaaatctcg 120

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gaatacattg ccgttttcat tgcagctatc tttccgggtg gtcttgtagc ttttgataat 480
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&lt;210&gt; 128

&lt;211&gt; 368

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 128

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Met Glu Ile Ser Gly Arg Arg Met Arg Arg Phe Arg Met Arg Phe Arg
1      5      10

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Arg Asp His Leu Thr Gly Gly Glu Asn Ile Glu Asn Glu Ala Ser Cys
20      25      30

```

```

Cys Tyr Cys Asp Leu Lys Ile Ser Asn Phe Asn Glu Pro Ile Phe Arg
35      40      45

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Leu Gly Arg Arg Phe Ser Gly Val Leu Lys Val Trp Phe Ser Ile Gly
50      55      60

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 Leu Gln Phe His Ser Asn Pro Leu Phe Ser Asn Arg Leu Thr Ser Ala  
 85 90 95  
 Val Phe Gly Phe Ser Pro Ser Thr Arg Val Ser Leu Ser Gly Ile Ala  
 100 105 110  
 Tyr Val Leu Val Ser Thr Val Ile Thr Val Ser Val His Glu Leu Gly  
 115 120 125  
 His Ala Leu Ala Ala Ala Ser Glu Gly Ile Gln Met Glu Tyr Ile Ala  
 130 135 140  
 Val Phe Ile Ala Ala Ile Phe Pro Gly Gly Leu Val Ala Phe Asp Asn  
 145 150 155 160  
 Asp Val Leu Gln Ser Leu Pro Ser Phe Asn Ala Leu Arg Ile Tyr Cys  
 165 170 175  
 Ala Gly Ile Trp His Asn Ala Val Val Gly Ser Ser Leu Ser Ser Phe  
 180 185 190  
 Tyr Phe Cys Ala Leu Cys Val Phe Ala Leu Phe Leu Leu Pro Val Met  
 195 200 205  
 Leu Ser Pro Phe Tyr Lys His Gly Glu Ser Leu Thr Val Val Asp Val  
 210 215  
 Pro Ser Val Ser Pro Leu Phe Gly Tyr Leu Ser Pro Gly Asp Val Ile  
 225 230 235 240  
 Val Ser Leu Asp Gly Ile Gln Val His Lys Pro Ser Glu Trp Leu Glu  
 245 250 255  
 Leu Ala Ala Ile Leu Asp Lys Glu Asn Ser Lys Thr Ser Asn Gly Ser  
 260 265 270  
 Leu Tyr Leu Gly Gly Ser Arg Arg Phe His His Gly Lys Gly Tyr Cys  
 275 280 285  
 Val Pro Ile Ser Leu Ile Glu Glu Gly Tyr Lys Gly Lys Met Val Glu  
 290 295 300  
 Asn Gln Phe Val Cys Pro Gly Asp Leu Thr Ala Phe Arg Thr Met Pro  
 305 310 315 320

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Cys Ser Asn Ala Ala Ile Arg Glu Val Ser Val Cys Leu Asp Ala Lys  
325 330 335

Asp Ile Val Lys Leu Gln Lys Cys Gly Asp Gly Trp Val Thr Thr Ser  
340 345 350

Asp Thr Asp Asn Gln Ser Asp Cys Val Cys Pro Gln Val Asn Ile Ala  
355 360 365

<210> 129

<211> 2802

<212> DNA

<213> Arabidopsis thaliana

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caagtgcagt tagccctagc gatcagtgtc tcgaattcgc agtccagtga ggatccggag 300  
aagcatcaga tccgagcggc gacgcttctg agcttaggaa gccatcaacg gatggattca 360  
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gtgcttgact atgaggagaa agttgtcgat agtttctacg acgtatacag tctatccaca 480  
gactccgcaa agcaggggaga aatgccatcg ctggaagatc ttgaaagcaa tcatggcaca 540  
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<211> 933

<212> PRF

<213> Arabidopsis thaliana

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35 40 45Thr Leu Pro Val Ala Gly Ala Thr Ser Ser Met Ala Ser Pro Ala Pro  
50 55 60Thr Ala Ala Ser Asn Arg Ala Asp Tyr Met Ser Ser Glu Glu Glu Tyr  
65 70 75 80Gln Val Gln Leu Ala Leu Ala Ile Ser Ala Ser Asn Ser Gln Ser Ser  
85 90 95Glu Asp Pro Glu Lys His Gln Ile Arg Ala Ala Thr Leu Leu Ser Leu  
100 105 110Gly Ser His Gln Arg Met Asp Ser Arg Arg Asp Ser Ser Glu Val Val  
115 120 125Ala Gln Arg Leu Ser Arg Gln Tyr Trp Glu Tyr Gly Val Leu Asp Tyr  
130 135 140Glu Glu Lys Val Val Asp Ser Phe Tyr Asp Val Tyr Ser Leu Ser Thr  
145 150 155 160Asp Ser Ala Lys Gln Gly Glu Met Pro Ser Leu Glu Asp Leu Glu Ser  
165 170 175Asn His Gly Thr Pro Gly Phe Glu Ala Val Val Val Asn Arg Pro Ile  
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210 215 220Leu Val Thr Glu His Met Gly Gly Ser Ala Glu Asp Ser Ser Ile Val  
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Leu Ala Arg Trp Thr Glu Lys Ser Ser Glu Phe Lys Ala Ala Leu Asn  
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 275 280 285  
 Arg Leu Val Lys Gly Ser His Tyr Thr Gly Asn Glu Asp Asp Ala Val  
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 325 330 335  
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 340 345 350  
 Gln Phe Ser Asn Asp Val Pro Lys Leu Ser Glu Gly Glu Gly Ser Ser  
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 His Ser Ser Met Ala Asn Tyr Ser Ser Ser Leu Asp Arg Arg Thr Glu  
 370 375 380  
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 385 390 395 400  
 Ile Asp Tyr Ser Ser Pro Ser Ser Val Thr Ser Ser Thr Gln Leu Glu  
 405 410 415  
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 420 425 430  
 Glu Cys Ser Arg Thr Asn Met Asn Ile Val Pro Tyr Asn Gln Asn Ser  
 435 440 445  
 Glu Glu Asp Pro Lys Asn Leu Phe Ala Asp Leu Asn Pro Phe Gln Asn  
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 Val Asp Asp Phe His Gln Gln Lys Asn Asn Pro Leu Val Gly Arg Ser  
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Pro Ala Pro Met Met Trp Lys Asn Tyr Ser Cys Asn Glu Ala Pro Lys  
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Asp Pro Arg Tyr Gly Asn Thr Gln Ser Ser Tyr Ala Thr Ser Ser Ser  
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Asn Gly Ala Ile Ser Ser Asn Val His Gly Arg Asp Asn Val Thr Phe  
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Val Ser Pro Val Ala Val Pro Ser Ser Phe Thr Ser Thr Glu Asn Gln  
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Phe Arg Pro Ser Ile Val Glu Asp Met Asn Arg Asn Thr Asn Asn Glu  
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Leu Asp Leu Gln Pro His Thr Ala Ala Val Val His Gly Gln Gln Asn  
595 600 605

Asp Glu Ser His Ile His Asp His Arg Lys Tyr Thr Ser Asp Asp Ile  
610 615 620

Ser Thr Gly Cys Asp Pro Arg Leu Lys Asp His Glu Ser Thr Ser Ser  
625 630 635 640

Ser Leu Asp Ser Thr Ser Tyr Arg Asn Asp Pro Gln Val Leu Asp Asp  
645 650 655

Ala Asp Val Gly Glu Cys Glu Ile Pro Trp Asn Asp Leu Val Ile Ala  
660 665 670

Glu Arg Ile Gly Leu Gly Ser Tyr Gly Glu Val Tyr His Ala Asp Trp  
675 680 685

His Gly Thr Glu Val Ala Val Lys Lys Phe Leu Asp Gln Asp Phe Ser  
690 695 700

Gly Ala Ala Leu Ala Glu Phe Arg Ser Glu Val Arg Ile Met Arg Arg  
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Leu Arg His Pro Asn Val Val Phe Phe Leu Gly Ala Val Thr Arg Pro  
725 730 735

Pro Asn Leu Ser Ile Val Thr Glu Phe Leu Pro Arg Gly Ser Leu Tyr  
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Arg Ile Leu His Arg Pro Lys Ser His Ile Asp Glu Arg Arg Arg Ile  
 755 760 765

Lys Met Ala Leu Asp Val Ala Met Gly Met Asn Cys Leu His Thr Ser  
 770 775 780

Thr Pro Thr Ile Val His Arg Asp Leu Lys Thr Pro Asn Leu Leu Val  
 785 790 795 800

Asp Asn Asn Trp Asn Val Lys Val Gly Asp Phe Gly Leu Ser Arg Leu  
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Lys His Asn Thr Phe Leu Ser Ser Lys Ser Thr Ala Gly Thr Pro Glu  
 820 825 830

Trp Met Ala Pro Glu Val Leu Arg Asn Glu Pro Ser Asn Glu Lys Cys  
 835 840 845

Asp Val Tyr Ser Phe Gly Val Ile Leu Trp Glu Leu Ala Thr Leu Arg  
 850 855 860

Leu Pro Trp Arg Gly Met Asn Pro Met Gln Val Val Gly Ala Val Gly  
 865 870 875 880

Phe Gln Asn Arg Arg Leu Glu Ile Pro Lys Glu Leu Asp Pro Val Val  
 885 890 895

Gly Arg Ile Ile Leu Glu Cys Trp Gln Thr Asp Pro Asn Leu Arg Pro  
 900 905 910

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<211> 1716

<212> DNA

<213> Arabidopsis thaliana

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&lt;211&gt; 571



&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 132

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 35 40 45

Lys Ile Cys Leu Ala Lys His Thr Asp Lys Leu Lys Gln Thr Ala Leu  
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Gln Glu Met Lys Leu Leu Ser Ser Leu Lys Asn Pro Tyr Ile Val His  
 65 70 75 80

Tyr Glu Asp Ser Trp Ile Asp Asn Asp Asn Asn Ala Cys Ile Phe Thr  
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Ala Tyr Tyr Glu Gly Gly Asn Met Ala Asn Ala Ile Lys Lys Ala Arg  
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Gly Lys Leu Phe Pro Glu Glu Arg Ile Phe Lys Trp Leu Ala Gln Leu  
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Leu Leu Ala Val Asn Tyr Leu His Ser Asn Arg Val Val His Met Asp  
 130 135 140

Leu Thr Cys Ser Asn Ile Phe Leu Pro Lys Asp Asp His Val Gln Leu  
 145 150 155 160

Gly Asn Tyr Gly Leu Ala Lys Leu Ile Asn Pro Glu Lys Pro Val Ser  
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Met Val Ser Gly Ile Ser Asn Ser Met Cys Pro Glu Val Leu Glu Asp  
 180 185 190

Gln Pro Tyr Gly Tyr Lys Ser Asp Ile Trp Ser Leu Gly Cys Cys Met  
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Tyr Glu Ile Thr Ala His Gln Pro Ala Phe Lys Ala Pro Asp Met Ala  
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Gly Leu Ile Asn Lys Ile Asn Arg Ser Leu Met Ser Pro Leu Pro Ile  
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 275 280 285  
 Pro Val Phe Pro Ile Lys Pro Val Asn Ser Pro Lys Asp Lys Ala Arg  
 290 295 300  
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 Lys Ser Glu Val Ser Arg Ser Leu Glu Asn Leu Tyr Pro Phe Trp Thr  
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 355 360 365  
 Asp Thr Leu Lys Ile Ser Glu Phe Thr Ser Gln Lys Ser Asp Glu Ser  
 370 375 380  
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 385 390 395 400  
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 405 410 415  
 Gln Leu Arg Asp Val Asp Val Gly Val Val Ser Ala Gln Glu Val Ala  
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 Pro Lys Pro Lys Glu Gln Ile Thr Val Pro Ile Ser Ser Val Ala His  
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Glu Gly Asp Lys Ala Lys Met Val Lys Leu Thr Ala Ser Glu Met Ser  
 485 490 495

Ser Val Leu Ser Lys Leu Thr Lys Leu Gly Pro Pro Gln Ser Lys Glu  
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Arg Ala Asp Ala Leu Glu Cys Leu Leu Glu Lys Cys Ala Gly Leu Val  
 515 520 525

Lys Gln Glu Lys Tyr Glu Glu Leu Ala Gly Leu Leu Thr Pro Phe Gly  
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<211> 1908

<212> DNA

<213> Arabidopsis thaliana

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gaggatctct tagctaacag tgctaggtcc ttggagacat tagttactgt tggaaatgcaa    1860
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&lt;210&gt; 134

&lt;211&gt; 635

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 134

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Pro Gly Ser Gly Ser Val Ser Gly Leu Ala Ser Gln Arg Ser Val Ser
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Met Lys Phe Lys Asp Lys Trp Leu Ala Cys Val Ser Phe Gly Glu Gln  
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Thr Phe Arg Ser Glu Ile Ser Asp Ser Thr Glu Lys Pro Ile Trp Asn  
85 90 95

Ser Glu Lys Lys Leu Leu Leu Glu Lys Asn Gly Pro Ser Leu Ala Arg  
100 105 110

Ile Ser Val Phe Glu Thr Asn Arg Leu Leu Lys Asn Asn Ile Val Gly  
115 120 125

Tyr Cys Glu Leu Asp Leu Leu Asp Phe Val Val Gln Glu Pro Asp Ser  
130 135 140

Thr Cys Lys Ser Phe Asp Leu Leu Asp Pro Ala Ser Ser Asn Val Val  
145 150 155 160

Gly Ser Met Phe Val Ser Cys Ser Val Glu Asp Pro Val Glu Thr Glu  
165 170 175

Thr Cys Phe Ala Lys Arg Ile Leu Ser Ile Val Asp Tyr Asp Glu Asp  
180 185 190

Gly Lys Leu Ser Phe Ser Glu Phe Ser Asp Leu Met Asn Ala Phe Gly  
195 200 205

Asn Val Val Ala Ala Asn Lys Lys Glu Glu Leu Phe Lys Ala Ala Asp  
210 215 220

Leu Asn Gly Asp Gly Val Val Thr Ile Asp Glu Leu Ala Ala Leu Leu  
225 230 235 240

Ala Val Gln Gln Glu Gln Glu Pro Ile Ile Asn Ser Cys Pro Val Cys  
245 250 255

Gly Glu Ala Leu Gln Leu Asp Lys Leu Asn Ala Met Ile His Met Thr  
260 265 270

Leu Cys Phe Asp Glu Gly Thr Gly Asn Gln Met Thr Gly Gly Phe Leu  
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Thr Asp Arg Gln Ala Ser Tyr Gly Trp Met Phe Lys Leu Ser Glu Trp  
290 295 300

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 Lys Ile Gly Leu Arg Leu Met Asp Gln Gly Ala Lys Glu Ile Leu Gln  
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 Asn Leu Ser Glu Lys Gln Gly Lys Lys Met Asn Ser Val Glu Ser Ala  
 370 375 380  
 Gln Asn Ile Pro Ser Phe Leu Glu Phe Phe Lys Asp Gln Ile Asn Met  
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 Ala Glu Val Lys Tyr Pro Leu Asp His Phe Lys Thr Phe Asn Glu Phe  
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 Phe Val Arg Glu Leu Lys Pro Gly Ala Arg Pro Ile Ala Cys Met Asp  
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 Phe His Ser Pro Val Ser Gly Val Ile Glu Lys Phe Val Asn Val Ser  
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 Gly Ser Leu Tyr Thr Val Asn Pro Ile Ala Val Asn Ser Lys Tyr Cys  
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 Glu Phe Gly Lys Val Ala Phe Val Ala Ile Gly Ala Thr Met Val Glu  
 545 550 555 560

Ser Ile Ser Phe Val Arg Gln Glu Gly Asp His Val Lys Lys Gly Asp  
565 570 575

Glu Leu Gly Tyr Phe Ser Phe Gly Gly Ser Thr Val Ile Cys Val Phe  
580 585 590

Glu Lys Asp Ser Ile Lys Ile Asp Glu Asp Leu Leu Ala Asn Ser Ala  
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gtcattccgg gtattttcgt tgactagct ctaagatttg atgtgtcaag acgtagacaa 780  
ccacaatact tcacaagtgc atttatcgga tacgctgttg gtgtgatcct cagcattgta 840  
gtcatgaact ggtttcaagc agcacagcct gctttgttat acattgtccc agccgtaatt 900

gggttcttgg cttctcactg catttggaac ggtgacatca aaccgttggt ggcgtttgat 960  
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 gctcatgatg aatga 1035

<210> 136

<211> 344

<212> PRT

<213> Arabidopsis thaliana

<400> 136

Met Lys Asn Cys Glu Arg Phe Ala Asn Leu Ala Leu Ala Gly Leu Thr  
 1 5 10 15

Leu Ala Pro Leu Val Val Arg Val Asn Pro Asn Leu Asn Val Ile Leu  
 20 25 30

Thr Ala Cys Ile Thr Val Tyr Val Gly Cys Phe Arg Ser Val Lys Asp  
 35 40 45

Thr Pro Pro Thr Glu Thr Met Ser Lys Glu His Ala Met Arg Phe Pro  
 50 55 60

Leu Val Gly Ser Ala Met Leu Leu Ser Leu Phe Leu Leu Phe Lys Phe  
 65 70 75 80

Leu Ser Lys Asp Leu Val Asn Ala Val Leu Thr Ala Tyr Phe Phe Val  
 85 90 95

Leu Gly Ile Val Ala Leu Ser Ala Thr Leu Leu Pro Ala Ile Arg Arg  
 100 105 110

Phe Leu Pro Asn Pro Trp Asn Asp Asn Leu Ile Val Trp Arg Phe Pro  
 115 120 125

Tyr Phe Lys Ser Leu Glu Val Glu Phe Thr Lys Ser Gln Val Val Ala  
 130 135 140

Gly Ile Pro Gly Thr Phe Phe Cys Ala Trp Tyr Ala Trp Lys Lys His  
 145 150 155 160

Trp Leu Ala Asn Asn Ile Leu Gly Leu Ser Phe Cys Ile Gln Gly Ile  
 165 170 175



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Glu Met Leu Ser Leu Gly Ser Phe Lys Thr Gly Ala Ile Leu Leu Ala  
180 185 190

Gly Leu Phe Phe Tyr Asp Ile Phe Trp Val Phe Phe Thr Pro Val Met  
195 200 205

Val Ser Val Ala Lys Ser Phe Asp Ala Pro Ile Lys Leu Leu Phe Pro  
210 215 220

Thr Gly Asp Ala Leu Arg Pro Tyr Ser Met Leu Gly Leu Gly Asp Ile  
225 230 235 240

Val Ile Pro Gly Ile Phe Val Ala Leu Ala Leu Arg Phe Asp Val Ser  
245 250 255

Arg Arg Arg Gln Pro Gln Tyr Phe Thr Ser Ala Phe Ile Gly Tyr Ala  
260 265 270

Val Gly Val Ile Leu Thr Ile Val Val Met Asn Trp Phe Gln Ala Ala  
275 280 285

Gln Pro Ala Leu Leu Tyr Ile Val Pro Ala Val Ile Gly Phe Leu Ala  
290 295 300

Ser His Cys Ile Trp Asn Gly Asp Ile Lys Pro Leu Leu Ala Phe Asp  
305 310 315 320

Glu Ser Lys Thr Glu Glu Ala Thr Thr Asp Glu Ser Lys Thr Ser Glu  
325 330 335

Glu Val Asn Lys Ala His Asp Glu  
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<210> 137

<211> 456

<212> DNA

<213> Arabidopsis thaliana

<400> 137	
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ggccaagtcg ctgagattgt agatcgagga tccaaatcgt gttgtgcggc tggagcatta	180
tacatgttga tagacttaat aacaagttgt gggcgtatgt acgcgtgttt ctatagtgga	240

aagatgagag ctcaatacaa tattaagga gatggttgta ctgattgcct taaacatttt 300  
 tgctgtaacc tctgtgcttt gacccaacaa taccgtgaac tcaagcaccg cggtttcgat 360  
 atgagccttg gatgggcagg gaacgcagag aaacaacaaa atcaaggtgg agtggcgatg 420  
 ggtgctccag ccttccaagg cggcattgacc cgctaa 456

<210> 138

<211> 151

<212> PRT

<213> Arabidopsis thaliana

<400> 138

Met Glu Ala Gln Leu His Ala Lys Pro His Ala Gln Gly Glu Trp Ser  
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Thr Gly Phe Cys Asp Cys Phe Ser Asp Cys Arg Asn Cys Cys Ile Thr  
 20 25 30

Leu Cys Cys Pro Cys Ile Thr Phe Gly Gln Val Ala Glu Ile Val Asp  
 35 40 45

Arg Gly Ser Lys Ser Cys Cys Ala Ala Gly Ala Leu Tyr Met Leu Ile  
 50 55 60

Asp Leu Ile Thr Ser Cys Gly Arg Met Tyr Ala Cys Phe Tyr Ser Gly  
 65 70 75 80

Lys Met Arg Ala Gln Tyr Asn Ile Lys Gly Asp Gly Cys Thr Asp Cys  
 85 90 95

Leu Lys His Phe Cys Cys Asn Leu Cys Ala Leu Thr Gln Gln Tyr Arg  
 100 105 110

Glu Leu Lys His Arg Gly Phe Asp Met Ser Leu Gly Trp Ala Gly Asn  
 115 120 125

Ala Glu Lys Gln Gln Asn Gln Gly Gly Val Ala Met Gly Ala Pro Ala  
 130 135 140

Phe Gln Gly Gly Met Thr Arg  
 145 150

<210> 139

&lt;211&gt; 411

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 139

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aaagacaagg acaagaagaa acccatctct cgctctgctc gtgctggtat tcagtttcca      120
gttgacgcaa ttcacaggca actgaagacc cgagtctcgg cacatggcag agttgggtgcc      180
actgcagccg tctacacagc ttcaatcctg gagtatctga cagcagaggt tcttgagttg      240
gctgggaatg cgagcaagga tctcaaagtg aagaggataa cgccaaggca tctgcagttg      300
gcgattagag gagatgagga gctggacaca ctcatcaagg gaacgattgc tggagggtgt      360
gtgatccctc acatccacaa gtctctcatc aacaaaacca ccaaggagtg a              411

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&lt;210&gt; 140

&lt;211&gt; 136

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 140

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Met Ala Gly Lys Gly Gly Lys Gly Leu Val Ala Ala Lys Thr Met Ala
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Ala Asn Lys Asp Lys Asp Lys Asp Lys Lys Lys Pro Ile Ser Arg Ser
              20              25              30
Ala Arg Ala Gly Ile Gln Phe Pro Val Gly Arg Ile His Arg Gln Leu
              35              40              45
Lys Thr Arg Val Ser Ala His Gly Arg Val Gly Ala Thr Ala Ala Val
              50              55              60
Tyr Thr Ala Ser Ile Leu Glu Tyr Leu Thr Ala Glu Val Leu Glu Leu
65              70              75              80
Ala Gly Asn Ala Ser Lys Asp Leu Lys Val Lys Arg Ile Thr Pro Arg
              85              90              95
His Leu Gln Leu Ala Ile Arg Gly Asp Glu Glu Leu Asp Thr Leu Ile
              100              105              110

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Lys Gly Thr Ile Ala Gly Gly Gly Val Ile Pro His Ile His Lys Ser  
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Leu Ile Asn Lys Thr Thr Lys Glu  
130 135

<210> 141

<211> 1701

<212> DNA

<213> Arabidopsis thaliana

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ctccccgtcg acccaaatct cgacgccgct tccgctcttt tctcacaca acaccacggc 180  
gatacagcgc tcatcgattc cttaccggg tttcfaatat ctacactga gctacagatt 240  
atggttcaat caatggcggc tgggatctat caggttttag gtgttcgtca aggtgacgtt 300  
gtatcactcg tcttgccata ttccgtctat ttccgatga ttttctctc ttgatctcg 360  
cttgggtgcta ttgttactac catgaatcct tcgagtattg taggagagat taagaagcaa 420  
gttagtgagt gtagtgttgg attagctttt acttctactg aaaacgttga gaagctgagt 480  
tctttggggg ttagtgtgat tagtgtatct gaaagttacg attttgattc gattcgtatc 540  
gaaaaccgga agttttactc cattatgaaa gaaagttttg ggttgtgacc aaaaccgttg 600  
attaagcaag acgatgtagc tgcaattatg tttcatctg gaacaactgg agctagtaaa 660  
ggagttttgt taactcatag gaatttgata gcatcaatgg agctttttgt gaggtttgaa 720  
gcttctcagt acgaatatcc gggatcgagt aatgtttatc tagcagcttt gcctttgtgc 780  
catatctacg ggttatcact ctttgtgatg ggattgtgt ctctgggac aactattgtt 840  
gttatgaaga ggtttgatgc ttctgatgtt gtaaatgtaa ttgaaaggtt taagatcact 900  
catttcccg tttgtccacc tatgttgatg gcattgacaa agaaggcaaa aggagtttgt 960  
ggtgaagtgt ttaaaagttt gaagcaagtt tcttctggag cagctccttt gagtaggaag 1020  
ttcattgaag atttcttca gactcttcct catgtcgatt tgattcaggg atatggaatg 1080  
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tctgtgggac tactggtccc taatatgcaa gccaaagtag tagattggag ctctggttct 1200  
ttccttcac caggaaaccg aggagagctc tggatacaag gtcccggtgt catgaaagga 1260  
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047-E2F-PCT.ST25.txt

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catcccttga ttatcgacgc tgcagtaaca gctgccccaa atgaagaatg tggagagatt 1500
ccggtagcat tcgttggtccg gagacaagaa acaacacttt cagaagaaga tgtaataagc 1560
tatgtagctt ctcaggttgc accctacagg aaggtaggga aagtggtgat ggtcaactct 1620
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<210> 142

<211> 566

<212> PRT

<213> Arabidopsis thaliana

<400> 142

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Ser His Gln Asn Pro Pro Phe Trp Phe Ser Ser Lys Thr Gly Ile Tyr  
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Thr Ser Lys Phe Pro Ser Leu His Leu Pro Val Asp Pro Asn Leu Asp  
35 40 45

Ala Val Ser Ala Leu Phe Ser His Lys His His Gly Asp Thr Ala Leu  
50 55 60

Ile Asp Ser Leu Thr Gly Phe Ser Ile Ser His Thr Glu Leu Gln Ile  
65 70 75 80

Met Val Gln Ser Met Ala Ala Gly Ile Tyr His Val Leu Gly Val Arg  
85 90 95

Gln Gly Asp Val Val Ser Leu Val Leu Pro Asn Ser Val Tyr Phe Pro  
100 105 110

Met Ile Phe Leu Ser Leu Ile Ser Leu Gly Ala Ile Val Thr Thr Met  
115 120 125

Asn Pro Ser Ser Ser Leu Gly Glu Ile Lys Lys Gln Val Ser Glu Cys  
130 135 140

047-E2F-PCT.ST25.txt

Ser Val Gly Leu Ala Phe Thr Ser Thr Glu Asn Val Glu Lys Leu Ser  
145 150 155

Ser Leu Gly Val Ser Val Ile Ser Val Ser Glu Ser Tyr Asp Phe Asp  
165 170 175

Ser Ile Arg Ile Glu Asn Pro Lys Phe Tyr Ser Ile Met Lys Glu Ser  
180 185 190

Phe Gly Phe Val Pro Lys Pro Leu Ile Lys Gln Asp Asp Val Ala Ala  
195 200 205

Ile Met Tyr Ser Ser Gly Thr Thr Gly Ala Ser Lys Gly Val Leu Leu  
210 215 220

Thr His Arg Asn Leu Ile Ala Ser Met Glu Leu Phe Val Arg Phe Glu  
225 230 235 240

Ala Ser Gln Tyr Glu Tyr Pro Gly Ser Ser Asn Val Tyr Leu Ala Ala  
245 250 255

Leu Pro Leu Cys His Ile Tyr Gly Leu Ser Leu Phe Val Met Gly Leu  
260 265 270

Leu Ser Leu Gly Ser Thr Ile Val Val Met Lys Arg Phe Asp Ala Ser  
275 280 285

Asp Val Val Asn Val Ile Glu Arg Phe Lys Ile Thr His Phe Pro Val  
290 295 300

Val Pro Pro Met Leu Met Ala Leu Thr Lys Lys Ala Lys Gly Val Cys  
305 310 315 320

Gly Glu Val Phe Lys Ser Leu Lys Gln Val Ser Ser Gly Ala Ala Pro  
325 330 335

Leu Ser Arg Lys Phe Ile Glu Asp Phe Leu Gln Thr Leu Pro His Val  
340 345 350

Asp Leu Ile Gln Gly Tyr Gly Met Thr Glu Ser Thr Ala Val Gly Thr  
355 360 365

Arg Gly Phe Asn Ser Glu Lys Leu Ser Arg Tyr Ser Ser Val Gly Leu  
370 375 380

Leu Ala Pro Asn Met Gln Ala Lys Val Val Asp Trp Ser Ser Gly Ser  
385 390 395 400

047-E2F-PCT.ST25.txt

Phe Leu Pro Pro Gly Asn Arg Gly Glu Leu Trp Ile Gln Gly Pro Gly  
405 415

Val Met Lys Gly Tyr Leu Asn Asn Pro Lys Ala Thr Gln Met Ser Ile  
420 425 430

Val Glu Asp Ser Trp Leu Arg Thr Gly Asp Ile Ala Tyr Phe Asp Glu  
435 440 445

Asp Gly Tyr Leu Phe Ile Val Asp Arg Ile Lys Glu Ile Ile Lys Tyr  
450 455 460

Lys Gly Phe Gln Ile Ala Pro Ala Asp Leu Glu Ala Val Leu Val Ser  
465 470 475 480

His Pro Leu Ile Ile Asp Ala Ala Val Thr Ala Ala Pro Asn Glu Glu  
485 490 495

Cys Gly Glu Ile Pro Val Ala Phe Val Val Arg Arg Gln Glu Thr Thr  
500 505 510

Leu Ser Glu Glu Asp Val Ile Ser Tyr Val Ala Ser Gln Val Ala Pro  
515 520 525

Tyr Arg Lys Val Arg Lys Val Val Met Val Asn Ser Ile Pro Lys Ser  
530 535 540

Pro Thr Gly Lys Ile Leu Arg Lys Glu Leu Lys Arg Ile Leu Thr Asn  
545 550 555 560

Ser Val Ser Ser Arg Leu  
565

<210> 143

<211> 1710

<212> DNA

<213> Arabidopsis thaliana

<400> 143  
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catttcagct	ccagacgcgg	tgctgtctca	gggatattac	taggagctgt	gacacttcct	240
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caagatgagc	ttgcacatgt	gacaatgcag	tattgggcag	catcggctag	ttgtgtgtct	360
atacttatat	atctatcagt	gattatgtca	caagtggaga	aagatgaatc	ttgtcgtca	420
tcgtctattt	ggcttacgag	agtttagctt	actgggacag	tggtgtatgg	agtagcatgt	480
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atgttatttc	atggacttgc	agctgtgaag	ttgattcgac	atttgctttg	cactttccca	600
tcgtgtgctt	cgatagggga	agcacttctt	gtgaccagtg	gtcttgctct	ctattttggc	660
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ccaatattag	catcaatggg	ttatatacta	agtcaaggat	gggtgtcgtc	tctggtggct	1620
gtgacagcca	ccgggatgtt	ggaagcttac	acggcgagct	tagacaatgc	ctttatacct	1680
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&lt;210&gt; 144

&lt;211&gt; 569

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana



&lt;400&gt; 144

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 20 25 30  
 Ser His Gly Phe Ser Leu Phe Leu Leu Ser Leu Ser Ala Phe Leu Val  
 35 40 45  
 Glu Ile Arg Val Glu Thr Ser Pro Phe Leu Leu Ser His Phe Ser Ser  
 50 55 60  
 Arg Arg Gly Ala Ser Ser Gly Ile Leu Leu Gly Ala Val Thr Leu Pro  
 65 70 75 80  
 Ser Val Met Ile Ser Lys Leu Val Gln Leu Ser Arg Ala Ile Ser Ile  
 85 90 95  
 His Glu Ala Glu Gln Asp Glu Leu Ala His Val Thr Met Gln Tyr Trp  
 100 105 110  
 Ala Ala Ser Ala Ser Cys Cys Ala Ile Leu Ile Tyr Leu Ser Val Ile  
 115 120 125  
 Met Ser Gln Val Arg Lys Asp Glu Ser Leu Ser Ser Ser Ile Trp  
 130 135 140  
 Leu Thr Arg Val Ser Leu Thr Gly Thr Val Leu Tyr Gly Val Ala Cys  
 145 150 155 160  
 Phe Val Ser Leu Ser Met Ile Ser His Thr Gly Leu Asn Thr Ser Leu  
 165 170 175  
 Lys Met Leu Trp Met Leu Phe His Gly Leu Ala Ala Val Lys Leu Ile  
 180 185 190  
 Arg His Leu Leu Cys Thr Phe Pro Ser Cys Ala Ser Ile Gly Glu Ala  
 195 200 205  
 Leu Leu Val Thr Ser Gly Leu Val Leu Tyr Phe Gly Asp Phe Leu Ala  
 210 215 220  
 Cys Thr Ile Ala Lys Ile Phe Glu Lys Leu Ile Pro Val Asp Leu Val  
 225 230 235 240  
 Ser Ile Ser Tyr Gly Ile Lys Arg Thr Glu Thr Gly Ile Ile Val Gln

Gly Leu Leu <sup>260</sup>Gly Leu Leu Leu <sup>265</sup>Phe Pro Met Val Phe Arg <sup>270</sup>Phe Val  
 Leu His <sup>275</sup>Ile Tyr Glu Ser Ser <sup>280</sup>Leu Arg Lys Arg Asp <sup>285</sup>Ala Arg Gln Arg  
 Asn Cys <sup>290</sup>Ser Asp Ala Ala <sup>295</sup>Lys Ser Val Leu Phe <sup>300</sup>Phe Val Ser Leu Leu  
 Phe <sup>305</sup>Phe Met Val Val <sup>310</sup>Ala Val Pro Ser Trp <sup>315</sup>Met Gln Phe Val His <sup>320</sup>Asp  
 Phe Asn Gln His <sup>325</sup>Pro Phe Leu Trp Val <sup>330</sup>Leu Thr Phe Val Phe <sup>335</sup>Ser Glu  
 Pro Leu Lys <sup>340</sup>Arg Leu Ser Leu Cys <sup>345</sup>Ile Tyr Trp Ile Leu <sup>350</sup>Leu Ile Val  
 Val Ser <sup>355</sup>Val Ser Arg Phe Tyr <sup>360</sup>Asn Ile Ser Arg Ser <sup>365</sup>Ser Lys Val Glu  
 Arg <sup>370</sup>Ile Leu Leu Arg Lys <sup>375</sup>Tyr Tyr His Leu Met <sup>380</sup>Ala Val Leu Met Phe  
 Leu <sup>385</sup>Pro Ala Leu Val <sup>390</sup>Leu Gln Pro Lys Phe <sup>395</sup>Leu Asp Leu Ala Phe <sup>400</sup>Gly  
 Ala Ala Leu Ala <sup>405</sup>Val Phe Val Ala Leu <sup>410</sup>Glu Ile Ile Arg Ile <sup>415</sup>Trp Arg  
 Ile Gln Pro <sup>420</sup>Leu Gly Glu Pro Leu <sup>425</sup>His Gln Phe Met Asn <sup>430</sup>Ala Phe Thr  
 Asp His <sup>435</sup>Arg Asp Ser Glu His <sup>440</sup>Leu Ile Val Ser <sup>445</sup>His Phe Ser Leu Leu  
 Leu <sup>450</sup>Gly Cys Ala Leu Pro <sup>455</sup>Ile Trp Met Ser Ser <sup>460</sup>Gly Phe Asn Asp Arg  
 Ala <sup>465</sup>Leu Ser Pro Phe <sup>470</sup>Ala Gly Ile Leu Ser <sup>475</sup>Leu Gly Ile Gly Asp <sup>480</sup>Thr  
 Met Ala Ser Met <sup>485</sup>Val Gly His Lys Tyr <sup>490</sup>Gly Val Leu Arg Trp <sup>495</sup>Ser Lys

Thr Gly Lys Lys Thr Val Glu Gly Thr Ala Ala Gly Ile Thr Ser Met  
500 505 510

Met Ala Val Cys Phe Val Leu Val Pro Ile Leu Ala Ser Met Gly Tyr  
515 520 525

Ile Leu Ser Gln Gly Trp Trp Ser Leu Leu Val Ala Val Thr Ala Thr  
530 535 540

Gly Met Leu Glu Ala Tyr Thr Ala Gln Leu Asp Asn Ala Phe Ile Pro  
545 550 555 560

Leu Val Phe Tyr Ser Leu Leu Cys Leu  
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<210> 145

<211> 1458

<212> DNA

<213> Arabidopsis thaliana

<400> 145  
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ggtgaagatt gcttctttt gaagttatgc actgaccctg aaacactaaa agcgaggagc 960

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gaatcctgcg agtaccaca agaggaaaga ggcaagaaca acacactgc attgtctgca 1380
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tggcatactg atgtctaa 1458

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&lt;210&gt; 146

&lt;211&gt; 485

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 146

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Met Glu Lys Lys Gln Gly Phe Phe Ser Ala Leu Arg His Glu Val Val
1      5      10      15

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Arg Gly Leu Ser Pro Ser Arg Ser Arg Ala Arg Ser Arg Ser Val Ser
20      25      30

```

```

Pro Ala Arg Ser Ser Ser Pro Met Ser Ala Leu Thr Trp Gly Arg Lys
35      40      45

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```

Asn Leu Thr Gly Gly Gly Gly Gly Gly Gly Gly Gly Tyr Tyr Leu
50      55      60

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```

Ala Gln Pro Glu Gln Leu Ile Gly Arg Ser Gly Ser Leu Arg Pro Val
65      70      75      80

```

```

Met Glu Gly Pro Asp Pro Asp Glu Gly Gly Gly Gly Gly Asn Ile Gly
85      90      95

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```

Glu Ser Lys Arg Leu Gly Ser Gly Leu Gly His Trp Val Lys Gly Gln
100     105     110

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```

Leu Ser Arg Ala Pro Ser Val Ala Ala Thr Ala Ala Tyr Arg Arg Asn
115     120     125

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Asp Leu Arg Leu Leu Leu Gly Val Met Gly Ala Pro Leu Ala Pro Ile  
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 His Val Ser Ser Ser Asp Pro Leu Pro His Leu Ser Ile Lys Asn Thr  
 145 150 155 160  
 Pro Ile Glu Thr Ser Ser Ala Gln Tyr Ile Leu Gln Gln Tyr Thr Ala  
 165 170 175  
 Ala Ser Gly Gly Gln Lys Leu Gln Asn Ser Ile Lys Asn Ala Tyr Ala  
 180 185 190  
 Met Gly Lys Leu Lys Met Ile Thr Ser Glu Leu Glu Thr Ala Thr Arg  
 195 200 205  
 Thr Val Arg Asn Arg Asn Pro Ser Lys Ala Glu Thr Gly Gly Phe Val  
 210 215 220  
 Leu Trp Gln Met Asn Pro Asp Met Trp Tyr Val Glu Leu Ala Val Gly  
 225 230 235 240  
 Gly Ser Lys Val Arg Ala Gly Cys Asn Gly Lys Leu Val Trp Arg His  
 245 250 255  
 Thr Pro Trp Leu Gly Ser His Thr Ala Lys Gly Pro Val Arg Pro Leu  
 260 265 270  
 Arg Arg Gly Leu Gln Gly Leu Asp Pro Arg Thr Thr Ala Ala Met Phe  
 275 280 285  
 Ala Glu Ala Lys Cys Ile Gly Glu Lys Lys Val Asn Gly Glu Asp Cys  
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 Phe Ile Leu Lys Leu Cys Thr Asp Pro Glu Thr Leu Lys Ala Arg Ser  
 305 310 315 320  
 Glu Gly Pro Ala Glu Ile Ile Arg His Val Leu Phe Gly Tyr Phe Ser  
 325 330 335  
 Gln Lys Thr Gly Leu Leu Val His Ile Glu Asp Ser His Leu Thr Arg  
 340 345 350  
 Ile Gln Ser Asn Gly Gly Glu Thr Val Phe Trp Glu Thr Thr Tyr Asn  
 355 360 365  
 Ser Ser Leu Asp Asp Tyr Arg Gln Val Glu Gly Ile Met Ile Ala His  
 370 375 380

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Ser Gly His Ser Val Val Thr Leu Phe Arg Phe Gly Glu Val Ala Thr  
385 390 395 400

Ser His Thr Arg Thr Lys Met Glu Glu Ser Trp Thr Ile Glu Glu Val  
405 410 415

Ala Phe Asn Val Pro Gly Leu Ser Leu Asp Cys Phe Ile Pro Pro Ala  
420 425 430

Asp Leu Lys Thr Gly Ser Leu Thr Glu Ser Cys Glu Tyr Pro Gln Glu  
435 440 445

Glu Arg Gly Lys Asn Asn Thr Leu Ala Leu Ser Ala Ala His Arg Ala  
450 455 460

Lys Val Ala Ala Leu Glu Asn Gly Ser Leu Glu Asp His Arg Pro Val  
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Trp His Thr Asp Val  
485

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<211> 807

<212> DNA

<213> Arabidopsis thaliana

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agcgcgggaa tgcctcggtt ggattcagac acttgtaag tctgtaggat cgaaggatgt 240  
ctcggctgta actacttttt cgcgccaaat cagagaattg aaaagaatca tcaacaagaa 300  
gaagagatta ctagttagtg taacagaaga agagagagct ctcccggtggc gaagaaagcg 360  
gaaggtggcg ggaataatcag gaagaggaag aacaagaaga atggttacag aggagttagg 420  
caaagacctt ggggaaaatt tgcagctgag atcagagatc ctaaaagagc cacacgtgtt 480  
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<210> 148

<211> 268

<212> PRT

<213> Arabidopsis thaliana

<400> 148

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 20 25 30

Ile Val Ser Ala Leu Gln His Val Ile Ser Gly Glu Asn Glu Thr Ala  
 35 40 45

Pro Cys Gln Gly Phe Ser Ser Asp Ser Thr Val Ile Ser Ala Gly Met  
 50 55 60

Pro Arg Leu Asp Ser Asp Thr Cys Gln Val Cys Arg Ile Glu Gly Cys  
 65 70 75 80

Leu Gly Cys Asn Tyr Phe Phe Ala Pro Asn Gln Arg Ile Glu Lys Asn  
 85 90 95

His Gln Gln Glu Glu Ile Thr Ser Ser Ser Asn Arg Arg Glu  
 100 105 110

Ser Ser Pro Val Ala Lys Lys Ala Glu Gly Gly Gly Lys Ile Arg Lys  
 115 120 125

Arg Lys Asn Lys Lys Asn Gly Tyr Arg Gly Val Arg Gln Arg Pro Trp  
 130 135 140

Gly Lys Phe Ala Ala Glu Ile Arg Asp Pro Lys Arg Ala Thr Arg Val  
 145 150 155 160

Trp Leu Gly Thr Phe Glu Thr Ala Glu Asp Ala Ala Arg Ala Tyr Asp  
 165 170 175

Arg Ala Ala Ile Gly Phe Arg Gly Pro Arg Ala Lys Leu Asn Phe Pro  
 Page 225

Phe Val Asp Tyr Thr Ser Ser Val Ser Ser Pro Val Ala Ala Asp Asp  
195 200 205

Ile Gly Ala Lys Ala Ser Ala Ser Ala Ser Val Ser Ala Thr Asp Ser  
210 215 220

Val Glu Ala Glu Gln Trp Asn Gly Gly Gly Gly Asp Cys Asn Met Glu  
225 230 235 240

Glu Trp Met Asn Met Met Met Met Asp Phe Gly Asn Gly Asp Ser  
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Ser Asp Ser Gly Asn Thr Ile Ala Asp Met Phe Gln  
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<211> 1035

<212> DNA

<213> Arabidopsis thaliana

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gaagaagatg agatcgctcg gtacggtggt ggaggttata agatccagac ggaggagccg 300  
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acggcggttg tgtttgacga tgaggaggag gagaagaaga ttatagatag cgcggcgacg 480  
gcggaggatg aaattgaaga ggagcttaag agtgtgatta tggttgagaa ttcagatctg 540  
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aagatgataa cggaagggaa atcaacgccg ttgactagac agttataccg gagatctgac 780  
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aaagagccgt cgctgagtc ggaagagttg aatcggcgag ttgaggcgtt tataaagaag 960  
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 agccgtgggg tttag 1035

<210> 150

<211> 344

<212> PRT

<213> Arabidopsis thaliana

<400> 150

Met Val Ser Trp Met Met Thr Thr Lys Ala Val Leu Ile Ser Ser Gly  
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Val Ala Thr Val Ala Leu Leu Leu Lys Leu Ser Val Pro Val Ala Val  
 20 25 30

Asp Phe Ser Val Ser Arg Ala Pro Ile Leu Trp Ser Ser Leu Leu Ser  
 35 40 45

Trp Leu Lys Pro Pro Tyr Leu Tyr Val Val Thr Asn Gly Ile Ile Ile  
 50 55 60

Thr Ile Val Ala Ser Ser Lys Tyr Tyr Arg Ser His His Asp Arg Asp  
 65 70 75 80

Glu Glu Asp Glu Ile Val Val Tyr Gly Gly Gly Gly Tyr Lys Ile Gln  
 85 90 95

Thr Glu Glu Pro Ile Val Asn Gln His Gln Ala Ser Pro Arg Ile Leu  
 100 105 110

Glu Val Lys Asp Leu Asp Thr Gly Ala His Phe Gly Phe Val Val Ala  
 115 120 125

Asn Leu Glu Ala Glu Glu Leu Glu Ser Glu Ala Val Thr Ala Val Val  
 130 135 140

Phe Asp Asp Glu Glu Glu Lys Lys Ile Ile Asp Ser Ala Ala Thr  
 145 150 155 160

Ala Glu Asp Glu Ile Glu Glu Glu Leu Lys Ser Val Ile Met Val Glu  
 165 170 175

047-E2F-PCT.ST25.txt

Asn Ser Asp Leu Val Glu Ser Asp Val Ile Pro Pro Pro Met Met Ile  
180 185 190

Glu Ser Glu Asn Leu Pro Pro Ile Glu Lys Pro Leu Val Thr Ser Arg  
195 200 205

Phe Gly His Arg Lys Leu Met Lys Ala Ser Gln Glu Gly Gly Arg Ala  
210 215 220

Leu Arg Val Thr Lys Pro Lys Lys Asn Glu Thr Leu Glu Asn Thr Trp  
225 230 235 240

Lys Met Ile Thr Glu Gly Lys Ser Thr Pro Leu Thr Arg Gln Leu Tyr  
245 250 255

Arg Arg Ser Asp Thr Phe Gly Arg Gly Asp Ser Gly Gly Val Asp Gly  
260 265 270

Glu Val Lys Pro Val Tyr Lys Lys Ser Asp Thr Phe Arg Asp Arg Thr  
275 280 285

Asn Tyr Tyr Gln Leu Ala Glu Thr Ala Lys Val Arg Lys Glu Pro Ser  
290 295 300

Leu Ser Gln Glu Glu Leu Asn Arg Arg Val Glu Ala Phe Ile Lys Lys  
305 310 315 320

Phe Asn Glu Glu Met Lys Leu Gln Arg Met Glu Ser Leu Arg Gln Tyr  
325 330 335

Lys Glu Ile Thr Ser Arg Gly Val  
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<210> 151

<211> 1431

<212> DNA

<213> Arabidopsis thaliana

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agatcccaca gtgcctccat aacagagtac ggtggtgtag gagacggcaa gacgctaaac 180  
acaaaggcct tccagagcgc cgttgatcat ctacgccaat actcatctga aggcggagca 240

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 attctaaagg ctttgccctc gtacggacga ggacgtgacg ccgccggtgg aagattcgct 420  
 agtctcatct tcggcactaa tctctccgac gtaattatca ccgggaacaa cggcacaatc 480  
 gacggtaacg gatcgttttg gtggcaaaag ttccacggtg gcaagctaaa atacactcgc 540  
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<210> 152

<211> 476

<212> PRT

<213> Arabidopsis thaliana

<400> 152

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Leu Ile Thr Ile Ser Gln Gly Arg Arg Val Ser Gln Ser Phe Glu Thr  
 20 25 30

Phe Glu Tyr Thr Ala Ile Ile Cys Arg Ser His Ser Ala Ser Ile Thr  
 Page 229

35

40

45

Glu Tyr Gly Gly Val Gly Asp Gly Lys Thr Leu Asn Thr Lys Ala Phe  
 50 55 60  
 Gln Ser Ala Val Asp His Leu Ser Gln Tyr Ser Ser Glu Gly Gly Ala  
 65 70 75 80  
 Gln Leu Phe Val Pro Ala Gly Lys Trp Leu Thr Gly Ser Phe Asn Leu  
 85 90 95  
 Thr Ser His Phe Thr Leu Phe Leu His Lys Asp Ala Ile Leu Ala  
 100 105 110  
 Ala Gln Asp Leu Asn Glu Tyr Pro Ile Leu Lys Ala Leu Pro Ser Tyr  
 115 120 125  
 Gly Arg Gly Arg Asp Ala Ala Gly Gly Arg Phe Ala Ser Leu Ile Phe  
 130 135 140  
 Gly Thr Asn Leu Ser Asp Val Ile Ile Thr Gly Asn Asn Gly Thr Ile  
 145 150 155 160  
 Asp Gly Gln Gly Ser Phe Trp Trp Gln Lys Phe His Gly Gly Lys Leu  
 165 170 175  
 Lys Tyr Thr Arg Pro Tyr Leu Ile Glu Leu Met Phe Ser Asp Thr Ile  
 180 185 190  
 Gln Ile Ser Asn Leu Thr Phe Leu Asp Ser Pro Ser Trp Asn Ile His  
 195 200 205  
 Pro Val Tyr Ser Ser Asn Ile Ile Val Lys Gly Val Thr Ile Ile Ala  
 210 215 220  
 Pro Val Lys Ser Pro Asn Thr Asp Gly Ile Asn Pro Asp Ser Cys Thr  
 225 230 235 240  
 Asn Thr Arg Ile Glu Asp Cys Tyr Ile Ile Ser Gly Asp Asp Cys Ile  
 245 250 255  
 Ala Val Lys Ser Gly Trp Asp Glu Tyr Gly Ile Ser Phe Gly Met Pro  
 260 265 270  
 Thr Lys His Leu Val Ile Arg Arg Leu Thr Cys Ile Ser Pro Tyr Ser  
 275 280 285

Ala Ala Ile Ala Leu Gly Ser Glu Met Ser Gly Gly Ile Glu Asp Val  
 290 295 300

Arg Ala Glu Asp Ile Thr Ala Tyr Gln Thr Glu Ser Gly Val Arg Ile  
 305 310 315 320

Lys Thr Ala Val Gly Arg Gly Ala Phe Val Lys Asn Ile Tyr Val Lys  
 325 330 335

Gly Met Asn Leu His Thr Met Lys Trp Val Phe Trp Met Thr Gly Asn  
 340 345 350

Tyr Lys Ala His Ala Asp Ser His Tyr Asp Pro His Ala Leu Pro Glu  
 355 360 365

Ile Thr Gly Ile Asn Tyr Arg Asp Ile Val Ala Glu Asn Val Ser Met  
 370 375 380

Ala Gly Arg Leu Glu Gly Ile Ser Gly Asp Pro Phe Thr Gly Ile Cys  
 385 390 395 400

Ile Ser Asn Ala Thr Ile Ser Met Ala Ala Lys His Lys Lys Ala Ile  
 405 410 415

Trp Met Cys Ser Asp Val Glu Gly Val Thr Ser Gly Val Asp Pro Lys  
 420 425 430

Pro Cys Asp Leu Leu Asp Gly Gln Glu Ser Glu Thr Thr Lys Lys Lys  
 435 440 445

Met Ile Asp Gly Gly Cys Asp Phe Pro Thr Asp Val Leu Glu Ile Asp  
 450 455 460

Asn Val Glu Leu Lys Thr Cys Ser Tyr Gln Met Ser  
 465 470 475

<210> 153

<211> 2760

<212> DNA

<213> Arabidopsis thaliana

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aacgctgacg ctgaccgtag aaataggtgt ggggctggtg ttttgcctta tgagttgttg 2700  
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<211> 919

<212> PRT

<213> Arabidopsis thaliana

<400> 154

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20 25 30

Thr Gln Phe Ser Ile Asn Pro Phe Asp Arg Arg Pro Arg Lys Thr Lys  
35 40 45

Ser Gly Val Val Ala Ala Ile Ser Glu Asp Leu Val Lys Thr Leu Arg  
50 55 60

Phe Ser Thr Thr Thr Gly Asp Arg Lys Ser Glu Glu Glu Glu Lys Ala  
65 70 75 80

Ala Val Lys Phe Lys Val Arg Ala Val Val Thr Val Arg Asn Lys Asn  
85 90 95

Lys Glu Asp Leu Lys Glu Thr Leu Val Lys His Leu Asp Ala Phe Ala  
233

Asp Lys Ile Gly Arg Asn Ile Val Leu Glu Leu Ile Ser Thr Gln Leu  
 115 120  
 Asp Pro Lys Thr Lys Leu Pro Lys Lys Ser Asn Ala Ala Val Leu Lys  
 130 135  
 Asp Trp Ser Lys Lys Ser Lys Thr Lys Ala Glu Arg Val His Tyr Thr  
 145 150 155  
 Ala Glu Phe Thr Val Asp Ala Ala Phe Gly Ser Pro Gly Ala Ile Thr  
 165 170 175  
 Val Met Asn Lys His Gln Lys Glu Phe Phe Leu Glu Ser Ile Thr Ile  
 180 185 190  
 Glu Gly Phe Ala Leu Gly Pro Val His Phe Pro Cys Asn Ser Trp Val  
 195 200 205  
 Gln Ser Gln Lys Asp His Pro Asp Lys Arg Ile Phe Phe Thr Asn Gln  
 210 215 220  
 Pro Tyr Leu Pro Asn Glu Thr Pro Ser Gly Leu Arg Val Leu Arg Glu  
 225 230 235 240  
 Lys Glu Leu Lys Asn Leu Arg Gly Asp Gly Ser Gly Val Arg Lys Leu  
 245 250 255  
 Ser Asp Arg Ile Tyr Asp Phe Asp Val Tyr Asn Asp Leu Gly Asn Pro  
 260 265 270  
 Asp Lys Ser Ser Glu Leu Ser Arg Pro Lys Leu Gly Gly Lys Glu Val  
 275 280 285  
 Pro Tyr Pro Arg Arg Cys Arg Thr Gly Arg Gln Ser Thr Val Ser Asp  
 290 295 300  
 Lys Asp Ala Glu Ser Arg Val Glu Lys Pro Leu Pro Met Tyr Val Pro  
 305 310 315 320  
 Arg Asp Glu Gln Phe Glu Glu Ser Lys Gln Asp Thr Phe Ala Ala Gly  
 325 330 335  
 Arg Leu Lys Ala Val Leu His His Leu Ile Pro Ser Leu Lys Ala Ser  
 340 345 350



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Ile Val Ala Glu Asp Phe Ala Asp Phe Gly Glu Ile Asp Arg Leu Tyr  
355 360 365

Lys Glu Gly Leu Leu Leu Lys Leu Gly Phe Gln Asp Asp Ile Phe Lys  
370 375 380

Lys Phe Pro Leu Pro Lys Val Val Val Asp Thr Leu Gln Glu Ser Thr  
385 390 395 400

Lys Gly Leu Leu Lys Tyr Asp Thr Pro Lys Ile Leu Ser Lys Asp Lys  
405 410 415

Asn Ala Trp Leu Arg Asp Asp Glu Phe Ala Arg Gln Ala Ile Ala Gly  
420 425 430

Ile Asn Pro Val Asn Ile Glu Arg Val Lys Thr Phe Pro Pro Val Ser  
435 440 445

Asn Leu Asp Pro Lys Ile Tyr Gly Pro Gln His Ser Ala Leu Thr Asp  
450 455 460

Asp His Ile Ile Gly His Leu Asp Gly Phe Ser Val Gln Gln Ala Leu  
465 470 475 480

Glu Glu Asn Arg Leu Tyr Met Leu Asp Tyr His Asp Ile Phe Leu Pro  
485 490 495

Phe Leu Asp Arg Ile Asn Ala Leu Asp Gly Arg Lys Ala Tyr Ala Thr  
500 505 510

Arg Thr Ile Phe Phe Leu Thr Arg Leu Gly Thr Leu Lys Pro Val Ala  
515 520 525

Ile Glu Leu Ser Leu Pro Pro His Gly Pro Lys His Arg Ser Lys Arg  
530 535 540

Val Leu Thr Pro Pro Val Asp Ala Thr Ser Asn Trp Met Trp Gln Leu  
545 550 555 560

Ala Lys Ala His Val Ser Ser Asn Asp Ala Gly Val His Gln Leu Val  
565 570 575

Asn His Trp Leu Arg Thr His Ala Cys Leu Glu Pro Phe Ile Leu Ala  
580 585 590

Ala His Arg Gln Leu Ser Ala Met His Pro Ile Phe Lys Leu Leu Asp  
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Pro His Met Arg Tyr Thr Leu Glu Ile Asn Ala Leu Ala Arg Gln Ser  
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Tyr Gly Met Glu Met Ser Ala Ala Ala Tyr Lys Ser Ser Trp Arg Phe  
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Pro Tyr Ala Asn Asp Gly Leu Leu Leu Trp Ser Ala Ile Gln Thr Trp  
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Val Arg Thr Tyr Val Glu Arg Tyr Tyr Pro Asn Pro Asn Leu Ile Lys  
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Thr Asp Ser Glu Leu Gln Ser Trp Tyr Ser Glu Ser Ile Asn Val Gly  
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His Ala Asp Leu Arg Asp Ala Asp Trp Trp Pro Glu Leu Ser Thr Val  
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Asp Asp Leu Val Ser Ile Leu Thr Thr Leu Ile Trp Leu Ala Ser Ala  
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Gln His Ala Ala Leu Asn Phe Gly Gln Tyr Pro Tyr Gly Gly Tyr Val  
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Pro Asn Arg Pro Pro Leu Met Arg Arg Leu Ile Pro Asp Glu Ser Asp  
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Ile Lys Ala Lys Glu Leu Phe Leu Arg Asp Val Asn Tyr Ile Ile Arg  
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Lys Arg Thr Trp Lys Val Asn Glu Lys Leu Phe Pro Cys Lys Leu Ser  
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Gln Phe Gln Pro Val Arg Val Lys Lys Asp Glu Glu Lys Lys Ser Gln  
 980 985 990

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Thr Ser Lys Pro Ser Gly Ser Asn Thr Ser Arg Ser Lys Arg Arg Lys  
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Ile Gln His Lys Lys Val Cys His Val Ala Ala Glu Ala Leu Asn Ser  
115 120 125

Asp Val Trp Ala Trp Arg Lys Tyr Gly Gln Lys Pro Ile Lys Gly Ser  
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Pro Tyr Pro Arg Gly Tyr Tyr Arg Cys Ser Thr Ser Lys Gly Cys Leu  
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Ala Arg Lys Gln Val Glu Arg Asn Arg Ser Asp Pro Lys Met Phe Ile  
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Val Thr Tyr Thr Ala Glu His Asn His Pro Ala Pro Thr His Arg Asn  
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Ser Leu Ala Gly Ser Thr Arg Gln Lys Pro Ser Asp Gln Gln Thr Ser  
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Lys Ser Pro Thr Thr Thr Ile Ala Thr Tyr Ser Ser Ser Pro Val Thr  
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Ser Ala Asp Glu Phe Val Leu Pro Val Glu Asp His Leu Ala Val Gly  
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Ser Asp Asp Phe Phe Asp Gly Leu Glu Glu Phe Ala Ala Gly Asp Ser  
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35 40 45

Thr Tyr Thr Ala Lys Asp Gly Lys Val Ser Gln Leu Glu His Val Phe  
50 55 60

Ile Arg Gly Ser Lys Val Arg Phe Met Val Ile Pro Asp Ile Leu Lys  
65 70 75 80

His Ala Pro Met Phe Lys Arg Leu Asp Ala Arg Ile Lys Gly Lys Ser  
85 90 95

Ser Ser Leu Gly Val Gly Arg Gly Arg Gly Ala Met Arg Gly Lys Pro  
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Val Arg Arg  
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Thr Ala Ile Ser Gln Tyr Ser Leu Gly Ala Leu Thr Gln Thr Phe Ser  
Page 247

50

55

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85 90 95

Leu Glu Thr Leu Cys Gly Gln Ala Tyr Gly Ala Gly Gln Ile Arg Met  
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Met Gly Ile Tyr Met Gln Arg Ser Trp Val Ile Leu Phe Thr Thr Ala  
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Phe Gly Glu Ala Pro His Ile Ser Lys Ala Ala Gly Lys Phe Ala Leu  
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Lys Phe Leu Gln Ser Gln Arg Lys Val Leu Val Met Ala Trp Ile Ser  
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Ser Asp Gly Ala Trp Thr Gly Phe Ser Met Leu Ala Phe Arg Asp Leu  
245 250 255

Tyr Gly Phe Val Lys Leu Ser Leu Ala Ser Ala Leu Met Leu Cys Leu  
260 265 270

Glu Phe Trp Tyr Leu Met Val Leu Val Val Val Thr Gly Leu Leu Pro  
275 280 285

Asn Pro Leu Ile Pro Val Asp Ala Ile Ser Ile Cys Met Asn Ile Glu  
290 295 300

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Gly Trp Thr Ala Met Ile Ser Ile Gly Phe Asn Ala Ala Ile Ser Val  
305 310 315 320

Arg Val Ser Asn Glu Leu Gly Ala Gly Asn Ala Ala Leu Ala Lys Phe  
325 330 335

Ser Val Ile Val Val Ser Ile Thr Ser Thr Leu Ile Gly Ile Val Cys  
340 345 350

Met Ile Val Val Leu Ala Thr Lys Asp Ser Phe Pro Tyr Leu Phe Thr  
355 360 365

Ser Ser Glu Ala Val Ala Ala Glu Thr Thr Arg Ile Ala Val Leu Leu  
370 375 380

Gly Phe Thr Val Leu Leu Asn Ser Leu Gln Pro Val Leu Ser Gly Val  
385 390 395 400

Ala Val Gly Ala Gly Trp Gln Ala Leu Val Ala Tyr Val Asn Ile Ala  
405 410 415

Cys Tyr Tyr Ile Ile Gly Leu Pro Ala Gly Leu Val Leu Gly Phe Thr  
420 425 430

Leu Asp Leu Gly Val Gln Gly Ile Trp Gly Gly Met Val Ala Gly Ile  
435 440 445

Cys Leu Gln Thr Leu Ile Leu Ile Gly Ile Ile Tyr Phe Thr Asn Trp  
450 455 460

Asn Lys Glu Ala Glu Gln Ala Glu Ser Arg Val Gln Arg Trp Gly Gly  
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Thr Ala Gln Glu

<210> 163

<211> 1485

<212> DNA

<213> Arabidopsis thaliana

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gatattttgg	atgttgggtt	aggttcacaa	gcttatgaga	ctgagaatta	catgagtgtt	240
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cagcatgata	tggagaatat	gtatatgtgg	gtgtttaagg	aaagacctga	gaatgcacta	480
gggaagatgc	agttgaggag	ttacatgaat	ggtcattcta	gacaagggga	tcgtttgttt	540
ccattttagt	ttgagaaagg	gtttgttagg	tctcacagaa	tcagagggaa	acactacaga	600
ggtttgcga	atccgcagtg	cgttcattgg	attgagcttg	ttcctttgcc	aaacctcacg	660
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accgatttat	ctccttcgag	ccacaagaag	aggaaggact	tgttctcaaa	tgggattcat	960
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gttcttgaga	tacttgtccc	aaaactaaga	gctggcccgg	aagagcacga	ggtgcgggtg	1440
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&lt;210&gt; 164

&lt;211&gt; 494

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 164

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1				5					10					15	



Ser Ser His Glu Glu Leu Asp Leu Glu Met Asn Asn Asn Arg Gln Ser  
 20 25 30  
 Leu Leu Ser Gly Pro Pro Asp Ile Asn Leu Pro Leu Ser Ala Glu Arg  
 35 40 45  
 Ser Pro Pro Pro Pro Pro Trp Asn Leu Asp Ala Cys Asp Ile Leu Asp  
 50 55 60  
 Val Gly Leu Gly Ser Gln Ala Tyr Glu Thr Glu Asn Tyr Met Ser Val  
 65 70 75 80  
 Val Pro Lys Val Gly Arg Lys Cys Ala Lys Arg Val Asp Ser Ile Trp  
 85 90 95  
 Gly Ala Trp Phe Phe Phe Ser Phe Tyr Phe Lys Pro Ala Leu Asn Glu  
 100 105 110  
 Lys Ser Lys Ala Lys Ile Val Arg Asp Ser Asn Gly Ile Ser Gly Phe  
 115 120 125  
 Asp Lys Ser Asp Leu Lys Leu Asp Val Phe Leu Val Gln His Asp Met  
 130 135 140  
 Glu Asn Met Tyr Met Trp Val Phe Lys Glu Arg Pro Glu Asn Ala Leu  
 145 150 155 160  
 Gly Lys Met Gln Leu Arg Ser Tyr Met Asn Gly His Ser Arg Gln Gly  
 165 170 175  
 Asp Arg Leu Phe Pro Phe Ser Val Glu Lys Gly Phe Val Arg Ser His  
 180 185 190  
 Arg Met Gln Arg Lys His Tyr Arg Gly Leu Ser Asn Pro Gln Cys Val  
 195 200 205  
 His Gly Ile Glu Leu Val Pro Leu Pro Asn Leu Thr Cys Leu Asp Glu  
 210 215 220  
 Glu Glu Arg Lys Arg Trp Met Glu Leu Thr Gly Arg Asp Leu Asn Phe  
 225 230 235 240  
 Thr Ile Pro Pro Glu Ala Ser Asp Phe Gly Ser Trp Arg Asn Leu Pro  
 245 250 255  
 Asn Thr Asp Phe Glu Leu Glu Arg Pro Thr Pro Ser Leu Lys Asn Pro  
 260 265 270

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Thr Ala Asn His Ser Lys Lys Leu Leu Asn Gly Ser Gly Leu Asn Leu  
 275 280 285

Ser Thr Gln Pro Ser Asn His Ser Asn Gly Glu Ala Thr Asp Leu Ser  
 290 295 300

Pro Ser Ser His Lys Lys Arg Lys Asp Leu Phe Ser Asn Gly Ile His  
 305 310 315 320

Glu Glu Glu Cys Cys Leu Thr Val Asn Pro Gln Pro Pro Val Ile Glu  
 325 330 335

Ala His Gln Asn Glu Leu Pro Thr Trp Ser Asn Glu Phe Thr Gly Ala  
 340 345 350

Met Lys Asn Val Tyr Gly Pro Val Thr Ala Ala Lys Thr Ile Tyr Glu  
 355 360 365

Asp Glu Glu Gly Tyr Leu Ile Ile Ile Ser Leu Pro Phe Val Asp Leu  
 370 375 380

Asn Ser Val Lys Val Ser Trp Arg Asn Thr Leu Thr His Gly Ile Ile  
 385 390 395 400

Lys Val Ser Cys Leu Ser Thr Ser Arg Val Pro Phe Ile Lys Arg His  
 405 410 415

Asp Arg Thr Phe Lys Leu Thr Asp Ser Ala Ser Glu His Cys Pro Pro  
 420 425 430

Gly Glu Phe Val Arg Glu Ile Pro Leu Ser Asn Arg Ile Pro Glu Asp  
 435 440 445

Ala Asn Ile Glu Ala Tyr Tyr Asp Gly Pro Gly Ser Val Leu Glu Ile  
 450 455 460

Leu Val Pro Lys Leu Arg Ala Gly Pro Glu Glu His Glu Val Arg Val  
 465 470 475 480

Cys Leu Arg Pro Asn Leu Gly Gly Asn Asp Leu Met Leu Thr  
 485 490

<210> 165

<211> 441

<212> DNA

<213> *Arabidopsis thaliana*

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<400> 165
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aggatgagga aacagaagca acttggtgat ttgatcaacg aagtcactct tctcaagaat    180
gataacgcta aaatcactga gcaggttgat gaagcttcaa agaaatacat tgaatggag      240
tctaagaaca atgtcttgag ggcacaggct tcggagttga cggataggtt gagatcattg    300
aactctgtgc ttgagatggt tgaagaaatt agtggtcagg ctttgatat tcctgagatt    360
cctgaatcta tgcagaacct ttggcagatg ccttgtccaa tgcaaccaat cagagcttct    420
gctgatatgt ttgattgctg a                                         441

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&lt;210&gt; 166

&lt;211&gt; 146

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 166

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Met Gly Ser Leu Gln Met Gln Thr Ser Pro Glu Ser Asp Asn Asp Pro
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Arg Tyr Ala Thr Val Thr Asp Glu Arg Lys Arg Lys Arg Met Ile Ser
20     25     30
Asn Arg Glu Ser Ala Arg Arg Ser Arg Met Arg Lys Gln Lys Gln Leu
35     40     45
Gly Asp Leu Ile Asn Glu Val Thr Leu Leu Lys Asn Asp Asn Ala Lys
50     55     60
Ile Thr Glu Gln Val Asp Glu Ala Ser Lys Lys Tyr Ile Glu Met Glu
65     70     75     80
Ser Lys Asn Asn Val Leu Arg Ala Gln Ala Ser Glu Leu Thr Asp Arg
85     90     95
Leu Arg Ser Leu Asn Ser Val Leu Glu Met Val Glu Glu Ile Ser Gly
100    105    110
Gln Ala Leu Asp Ile Pro Glu Ile Pro Glu Ser Met Gln Asn Pro Trp

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Gln Met Pro Cys Pro Met Gln Pro Ile Arg Ala Ser Ala Asp Met Phe  
130 135 140

Asp Cys  
145

<210> 167

<211> 1161

<212> DNA

<213> Arabidopsis thaliana

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ggctcatctt catctgatgg aagtcctgaa cgtaatcaga gccctaattc aaagcattct    180
aggaaagatt ctgaaccagt tcatgtgagg aaagaggata gatgggaatc tgatcgcagt    240
cgttatggta gaggagggtg tgattcacat agacatgata ggtactctag ggatgataat    300
tacggatata agcgtgatga gtataacaga catggggagg atgcgcgttc tactagccgt    360
gattcaagag gtggcagaca ttctgaccgt agaagagtgg agactgaata tagcaggтта    420
agaaatgact cagacagaag ttcccatgat aagtatagca actctggaca tagagtcaaa    480
agtaacgaga aagggtgaaga ttgtcatctt ggtagggagac actcagactc aagagtggag    540
gataatgaga aaagaggttc tcgctggggg tttggtgacc gtcattcccg tgttgaaaga    600
aaggaacatg aggaccctga gattagcaag gagaaggagg ttcatgtcaa atcttcaaga    660
gaccgtttctg atgggaaatg tttggctaca gaggatcgag atactcattc taagaaactg    720
aagggtttca tatcagacaa gtttactact ggcaatacta atgaagagaa acagacatca    780
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ttattgtggg gaaaaaagaa aagcacggct tcagaagagt ctgctcatcg ttgggataat    960
gcgagtgcgc taattggtga ccctgaacgg caagaaaagt tcaacaaact tatgggtgtg   1020
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gagttgcaga tggatctaga gaagcagtac acagcagggt taaggaggag agatggacga   1140
acagtagggt taggtctttg a                                     1161

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&lt;210&gt; 168

&lt;211&gt; 386

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 168

Met Asp Thr Glu Leu Asn Ser Pro Pro His Asp Asp Gly Gly Asp Thr  
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Thr Thr Ala Phe Arg Lys Pro Ser Asn Asp Gly Thr Ser Arg Lys Tyr  
 20 25 30

Arg Arg Arg Ala Leu Ala Asp Asp Gly Ser Ser Ser Ser Asp Gly Ser  
 35 40 45

Pro Glu Arg Asn Gln Ser Pro Asn Pro Lys His Ser Arg Lys Asp Ser  
 50 55 60

Glu Pro Val His Val Arg Lys Glu Asp Arg Trp Glu Ser Asp Arg Ser  
 65 70 75 80

Arg Tyr Gly Arg Gly Gly Val Asp Ser His Arg His Asp Arg Tyr Ser  
 85 90 95

Arg Asp Asp Asn Tyr Gly Tyr Lys Arg Asp Glu Tyr Asn Arg His Gly  
 100 105 110

Arg Asp Ala Arg Ser Thr Ser Arg Asp Ser Arg Gly Gly Arg His Ser  
 115 120 125

Asp Arg Arg Arg Val Glu Thr Glu Tyr Ser Arg Leu Arg Asn Asp Ser  
 130 135 140

Asp Arg Ser Ser His Asp Lys Tyr Ser Asn Ser Gly His Arg Val Lys  
 145 150 155 160

Ser Asn Glu Lys Gly Glu Asp Leu Ser Ser Gly Arg Arg His Ser Asp  
 165 170 175

Ser Arg Val Glu Asp Asn Glu Lys Arg Gly Ser Arg Trp Gly Phe Gly  
 180 185 190

Asp Arg His Ser Arg Val Glu Arg Lys Glu His Glu Asp Pro Glu Ile  
 195 200 205

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Ser Lys Glu Lys Glu Val His Val Lys Ser Ser Arg Asp Arg Ser Asp  
210 215 220

Gly Lys Cys Leu Ala Thr Glu Asp Arg Asp Thr His Ser Lys Lys Leu  
225 230 235 240

Lys Gly Phe Ile Ser Asp Lys Phe Thr Thr Gly Asn Thr Asn Glu Glu  
245 250 255

Lys Gln Thr Ser Ile Leu Lys Pro Ser Pro Gly Asp Val Asp Ala Ala  
260 265 270

Lys Val Ala Ala Met Gln Ala Ala Glu Leu Val Asn Lys Asn Leu Val  
275 280 285

Gly Thr Gly Tyr Leu Thr Thr Asp Gln Lys Lys Lys Leu Leu Trp Gly  
290 295 300

Lys Lys Lys Ser Thr Ala Ser Glu Glu Ser Ala His Arg Trp Asp Asn  
305 310 315 320

Ala Ser Ala Leu Ile Gly Asp Pro Glu Arg Gln Glu Lys Phe Asn Lys  
325 330 335

Leu Met Gly Val Lys Ala Lys Val Val Asn Gln Glu Gln Asn Leu Gly  
340 345 350

Glu Val Glu Ala Glu Lys Gln Lys Glu Leu Gln Met Asp Leu Glu Lys  
355 360 365

Gln Tyr Thr Ala Gly Leu Arg Arg Arg Asp Gly Arg Thr Val Gly Leu  
370 375 380

Gly Leu  
385

<210> 169

<211> 297

<212> DNA

<213> Arabidopsis thaliana

<400> 169  
atgtccggcg aggaagaagc caccgtgagg gagccactag atctgattag gctgagtctc 60  
gacgagagaa tctatgtcaa gctccggtca gaccgcgaac ttcgcggcaa gcttcacgcg 120  
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tttgcacgac atttgaatat gattctgggt gatgttgaag aaactatcac tacagtagaa 180  
atcgcgacgc agacatatga agagattggt cggactacaa agcggacgat tgagtttcta 240  
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<210> 170

<211> 98

<212> PRT

<213> Arabidopsis thaliana

<400> 170

Met Ser Gly Glu Glu Glu Ala Thr Val Arg Glu Pro Leu Asp Leu Ile  
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Arg Leu Ser Leu Asp Glu Arg Ile Tyr Val Lys Leu Arg Ser Asp Arg  
20 25 30

Glu Leu Arg Gly Lys Leu His Ala Phe Asp Gln His Leu Asn Met Ile  
35 40 45

Leu Gly Asp Val Glu Glu Thr Ile Thr Thr Val Glu Ile Asp Asp Glu  
50 55 60

Thr Tyr Glu Glu Ile Val Arg Thr Thr Lys Arg Thr Ile Glu Phe Leu  
65 70 75 80

Phe Val Arg Gly Asp Gly Val Ile Leu Val Ser Pro Pro Leu Arg Thr  
85 90 95

Ala Ala

<210> 171

<211> 1464

<212> DNA

<213> Arabidopsis thaliana

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gctgagaaga aaggattgct ttatttaggt atgggagctc ccggtggtga agaaggagct 420
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tttgagagctc atacatatga gagaaccgat cgtcctggtg cataccacac tgaatggact 1440
aagcttgcaa ggaagatgta gtaa 1464

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<210> 172

<211> 487

<212> PRT

<213> *Arabidopsis thaliana*

<400> 172

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 Ser Val Tyr Asn Arg Thr Thr Ser Lys Val Asp Glu Thr Leu Asp Arg  
 35 40 45  
 Ala Ser Asn Glu Gly Lys Leu Pro Val Ala Gly Gln Tyr Ser Pro Arg  
 50 55 60  
 Asp Phe Val Leu Ser Ile Gln Arg Pro Arg Ser Val Ile Ile Leu Val  
 65 70 75 80  
 Lys Ala Gly Ala Pro Val Asp Gln Thr Ile Ser Ala Leu Ser Glu Tyr  
 85 90 95  
 Met Glu Pro Gly Asp Cys Ile Ile Asp Gly Gly Asn Glu Trp Tyr Gln  
 100 105 110  
 Asn Thr Glu Arg Arg Ile Val Glu Ala Glu Lys Lys Gly Leu Leu Tyr  
 115 120 125  
 Leu Gly Met Gly Val Ser Gly Gly Glu Glu Gly Ala Arg Asn Gly Pro  
 130 135 140  
 Ser Leu Met Pro Gly Gly Ser Phe Thr Ala Tyr Asn Asn Val Lys Asp  
 145 150 155 160  
 Ile Leu Glu Lys Val Ala Ala Gln Val Glu Asp Gly Pro Cys Val Thr  
 165 170 175  
 Tyr Ile Gly Glu Gly Gly Ser Gly Asn Phe Val Lys Met Val His Asn  
 180 185 190  
 Gly Ile Glu Tyr Gly Asp Met Gln Leu Ile Ser Glu Ala Tyr Asp Val  
 195 200 205  
 Leu Lys Asn Val Gly Gly Leu Ser Asn Asp Glu Leu Ala Glu Ile Phe  
 210 215 220  
 Thr Glu Trp Asn Arg Gly Glu Leu Glu Ser Phe Leu Val Glu Ile Thr  
 225 230 235 240  
 Ser Asp Ile Phe Arg Val Lys Asp Asp Tyr Gly Asp Gly Glu Leu Val  
 245 250 255  
 Asp Lys Ile Leu Asp Lys Thr Gly Met Lys Gly Thr Gly Lys Trp Thr  
 260 265 270

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Val Gln Gln Ala Ala Glu Leu Ser Val Ala Ala Pro Thr Ile Ala Ala  
275 280 285

Ser Leu Asp Cys Arg Tyr Leu Ser Gly Leu Lys Asp Glu Arg Glu Asn  
290 295 300

Ala Ala Lys Val Leu Glu Glu Ala Gly Leu Lys Glu Asp Ile Gly Ser  
305 310 315 320

Ala Ser Arg Gly Val Asp Lys Lys Arg Leu Ile Asp Asp Val Arg Gln  
325 330 335

Ala Leu Tyr Ala Ser Lys Ile Cys Ser Tyr Ala Gln Gly Met Asn Leu  
340 345 350

Leu Arg Ala Lys Ser Leu Glu Lys Gly Trp Asp Leu Asn Leu Gly Glu  
355 360 365

Met Ala Arg Ile Trp Lys Gly Gly Cys Ile Ile Arg Ala Val Phe Leu  
370 375 380

Asp Arg Ile Lys Lys Ala Tyr Gln Arg Asn Pro Asn Leu Ala Ser Leu  
385 390 395 400

Val Val Asp Pro Asp Phe Ala Lys Glu Met Val Gln Arg Gln Ala Ala  
405 410 415

Trp Arg Arg Val Val Gly Leu Ala Ile Ser Ala Gly Ile Ser Thr Pro  
420 425 430

Gly Met Cys Ala Ser Leu Ala Tyr Phe Asp Thr Tyr Arg Arg Ala Arg  
435 440 445

Leu Pro Ala Asn Leu Val Gln Ala Gln Arg Asp Leu Phe Gly Ala His  
450 455 460

Thr Tyr Glu Arg Thr Asp Arg Pro Gly Ala Tyr His Thr Glu Trp Thr  
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Lys Leu Ala Arg Lys Ser Gln  
485

<210> 173

<211> 768

<212> DNA

<213> *Arabidopsis thaliana*

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<400> 173
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ggcggcagag cagtggtcgt tgcagcggct acgggtggaca caaacaacat gccgatgacc    180
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agagacaacg ttgctatgaa gggactagcc aaatttttca aggaatcaag tgaggaagag    420
agagggcatg ctgagaagtt tatggagtac cagaaccaa gaggaggaag agtgaaactc    480
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aaagtggcct cagagaacaa tgatccccag ttagctgatt tcgttgagag tgaatttctg    660
ggagagcaga ttgaagcaat caagaagatc tcagactaca tcaccagct aaggatgac    720
ggcaaaggcc acggagtttg gcatttcgac cagatgcttc tgaactag                    768

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&lt;210&gt; 174

&lt;211&gt; 255

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

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<400> 174
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1          5          10          15

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20          25          30

Leu Gly Phe Ser Arg Lys Val Gly Gly Arg Ala Val Val Val Ala
35          40          45

Ala Ala Thr Val Asp Thr Asn Asn Met Pro Met Thr Gly Val Val Phe
50          55          60

Gln Pro Phe Glu Glu Val Lys Lys Ala Asp Leu Ala Ile Pro Ile Thr
65          70          75          80

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Ser His Ala Ser Leu Ala Arg Gln Arg Phe Ala Asp Ala Ser Glu Ala  
85 90 95

Val Ile Asn Glu Gln Ile Asn Val Glu Tyr Asn Val Ser Tyr Val Tyr  
100 105 110

His Ser Met Tyr Ala Tyr Phe Asp Arg Asp Asn Val Ala Met Lys Gly  
115 120 125

Leu Ala Lys Phe Phe Lys Glu Ser Ser Glu Glu Glu Arg Gly His Ala  
130 135 140

Glu Lys Phe Met Glu Tyr Gln Asn Gln Arg Gly Gly Arg Val Lys Leu  
145 150 155 160

His Pro Ile Val Ser Pro Ile Ser Glu Phe Glu His Ala Glu Lys Gly  
165 170 175

Asp Ala Leu Tyr Ala Met Glu Leu Ala Leu Ser Leu Glu Lys Leu Thr  
180 185 190

Asn Glu Lys Leu Leu Asn Val His Lys Val Ala Ser Glu Asn Asn Asp  
195 200 205

Pro Gln Leu Ala Asp Phe Val Glu Ser Glu Phe Leu Gly Glu Gln Ile  
210 215 220

Glu Ala Ile Lys Lys Ile Ser Asp Tyr Ile Thr Gln Leu Arg Met Ile  
225 230 235 240

Gly Lys Gly His Gly Val Trp His Phe Asp Gln Met Leu Leu Asn  
245 250 255

<210> 175

<211> 975

<212> DNA

<213> Arabidopsis thaliana

<400> 175  
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caaaagcaaa gaatacatat tgcacgcgct ctctaccaag atgcggacat ctatctgttt 180  
gatgatcctt ttagtgctgt cgatgcacac acagggtcac atctcttttaa ggaagctcta 240

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 gatatactca tctctggaac agatttcagg gagcttatag gtgcgcata agagtctctg 420  
 gcagtagttg ggtcggtga tgccagttct gtttctgaaa actcagcttt agacgaagaa 480  
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 cttgtgcctt tcatattgtt ggggcaaatt ctctttcagc ttctacagat tggaagtaac 720  
 tactggatgg cttgggctac tcctatttct gaggatgtgc aagctcctgt gaaactttct 780  
 acgttaatgg ttgtgtatgt tgctttggca tttggaagtt ccctctgcat tcttgtaga 840  
 gccacgcttc ttgtcacggc tggttacaag actgctactg aactgtttca taaatgcat 900  
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<210> 176

<211> 324

<212> PRT

<213> Arabidopsis thaliana

<400> 176

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 1 5 10 15

Lys Asp Leu Glu Ile Leu Ser Phe Gly Asp Gln Thr Val Ile Gly Glu  
 20 25 30

Arg Gly Ile Asn Leu Ser Gly Gly Gln Lys Gln Arg Ile His Ile Ala  
 35 40 45

Arg Ala Leu Tyr Gln Asp Ala Asp Ile Tyr Leu Phe Asp Asp Pro Phe  
 50 55 60

Ser Ala Val Asp Ala His Thr Gly Ser His Leu Phe Lys Glu Ala Leu  
 65 70 75 80

Arg Gly Leu Leu Cys Ser Lys Ser Val Ile Tyr Val Thr His Gln Val  
 85 90 95

047-E2F-PCT.ST25.txt

Glu Phe Leu Pro Ser Ala Asp Leu Thr Leu Val Met Lys Asp Gly Arg  
                   100                  105                  110  
 Ile Ser Gln Ala Gly Lys Tyr Asn Asp Ile Leu Ile Ser Gly Thr Asp  
                   115                  120  
 Phe Arg Glu Leu Ile Gly Ala His Gln Glu Ser Leu Ala Val Val Gly  
                   130                  135                  140  
 Ser Ala Asp Ala Ser Ser Val Ser Glu Asn Ser Ala Leu Asp Glu Glu  
                   145                  150                  155                  160  
 Asn Gly Val Val Arg Asp Asp Ile Gly Phe Asp Gly Lys Gln Glu Ser  
                   165                  170                  175  
 Gln Asp Leu Lys Asn Asp Lys Leu Asp Ser Gly Glu Pro Gln Arg Gln  
                   180                  185                  190  
 Phe Val Gln Glu Glu Glu Arg Ala Lys Gly Ser Val Ala Leu Asp Val  
                   195                  200                  205  
 Tyr Trp Lys Tyr Ile Thr Leu Ala Tyr Gly Gly Ala Leu Val Pro Phe  
                   210                  215                  220  
 Ile Leu Leu Gly Gln Ile Leu Phe Gln Leu Leu Gln Ile Gly Ser Asn  
                   225                  230                  235                  240  
 Tyr Trp Met Ala Trp Ala Thr Pro Ile Ser Glu Asp Val Gln Ala Pro  
                   245                  250                  255  
 Val Lys Leu Ser Thr Leu Met Val Val Tyr Val Ala Leu Ala Phe Gly  
                   260                  265                  270  
 Ser Ser Leu Cys Ile Leu Val Arg Ala Thr Leu Leu Val Thr Ala Gly  
                   275                  280                  285  
 Tyr Lys Thr Ala Thr Glu Leu Phe His Lys Met His His Cys Ile Phe  
                   290                  295                  300  
 Arg Ser Pro Met Ser Phe Lys Ile Ala Lys Thr Cys Ser Lys Thr Cys  
                   305                  310                  315                  320  
 Ile Tyr Ser Ser

<210> 177

&lt;211&gt; 603

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 177

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ctctctagcc ttatctctca gttggaatca ccaaacccca aggggaaaga agatgtcata      180
accggagaag aagaagaaaa agaagaagaa tctgcagatt cttcaccatc caaaggaaaa      240
agcgggggcc agagacaatt ggaagaaagt atagaagaaa tagctaaaga catcaagaag      300
gtgaagaagc agaacaaaat aaccatgta cttctctcgg ctacgatcat cctgacattg      360
gtttggcagc tctctgagta ctccatgatt ttcattgtga aagatagaat aagccacca      420
gtcagatcca tcggagggat gcttaatgga atgttcaaag gtaagttacg tccaatcaag      480
aaccaacttg cggggacttc caactccaat gaccaaaca accatgggaa tggatcacac      540
actggacctc aacttcaagt gcccagagctg ttgcgagaat tcggtttcga cgatgaagaa      600
tga                                                                                   603

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&lt;210&gt; 178

&lt;211&gt; 200

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 178

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Met Glu Ser Ser   Glu Asp Val Glu Asn Leu Ser Arg Ala Ile Glu Lys
 1           5           10
Leu Leu His Glu Lys Arg Lys Arg Glu Ala Ser Gly Asp Ala Phe Ile
          20           25           30
Glu Asp Ala Asp Asp Gln Leu Phe Leu Ser Ser Leu Ile Ser Gln Leu
          35           40           45
Glu Ser Pro Asn Pro Lys Gly Lys Glu Asp Val Ile Thr Gly Glu Glu
          50           55           60
Glu Glu Lys Glu Glu Glu Ser Ala Asp Ser Ser Pro Ser Lys Gly Lys
65           70           75           80

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047-E2F-PCT.ST25.txt

Ser Glu Gly Gln Arg Gln Leu Glu Glu Ser Ile Glu Glu Ile Ala Lys  
85 90 95

Asp Ile Lys Lys Val Lys Lys Gln Asn Lys Ile Thr His Val Leu Leu  
100 105 110

Ser Ala Thr Ile Ile Leu Thr Leu Val Trp Gln Leu Ser Glu Tyr Ser  
115 120 125

Met Ile Phe Met Leu Lys Asp Arg Ile Ser His Pro Val Arg Ser Ile  
130 135 140

Gly Gly Met Leu Asn Gly Met Phe Lys Gly Lys Leu Arg Pro Ile Lys  
145 150 155 160

Asn Gln Leu Ala Gly Thr Ser Asn Ser Asn Asp Gln Asn Asn His Gly  
165 170 175

Asn Gly Ser His Thr Gly Pro Gln Leu Gln Val Pro Glu Leu Leu Arg  
180 185 190

Glu Phe Gly Phe Asp Asp Glu Glu  
195 200

<210> 179

<211> 1626

<212> DNA

<213> Arabidopsis thaliana

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ggcaatttcg aaaaaggctt catcttcggt gttgcatctt ctgcttacca ggtggaaggc 180  
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ctccttccaa aaggaaagag gacgagggga gtgaaccag gagctattaa gtactacaac 420  
ggtctcatag atggcctcgt cgcaaagaat atgacgccct ttgttaccct ctttcattgg 480  
gaccttcctc aaactacta agatgaatat aacggtttct tgaacaaaac gatcgtagac 540  
gatttcaagg attacgcgga tctatgtttc gagttatttg gtgatagggt aaagaactgg 600



047-E2F-PCT.ST25.txt

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atccatcatc accagctata cacagtcct actagaggat atgcattggg aacagatgca 660
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ccctatatgt ttgcacataa ccagcttctt gctcatgcag cggccgttga tgtttacagg 780
acgaaatata aggatgacca aaaaggatat attggaccag tgatgataac tagatggttt 840
cttcacattg atcatagtca agagagcaaa gatgcaactg agcgggctaa aatatttttc 900
catggatggt tcattggggc tctaacagaa ggtaaatacc cagacatcat gagggaaat 960
gttgggtgat ggcttcacga gttcagtgaa acagaagccg cacttgtaaa ggggttcata 1020
gattttcttg gtctcaacta ttacgtcact caatacgccc aaaataatca gacgattgtt 1080
ccttcggagc tacacactgc ctgatggac tcacgcacaa ctctcacatc taaaaatgca 1140
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tactacgtaa tggattactt caaaaccact tacggtgacc cttaatatata tgcactgag 1260
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<210> 180

<211> 541

<212> PRT

<213> Arabidopsis thaliana

<400> 180

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Met Lys Leu Leu Met Leu Ala Phe Val Phe Leu Leu Ala Leu Ala Thr
1      5      10      15

```

```

Cys Lys Gly Asp Glu Phe Val Cys Glu Glu Asn Glu Pro Phe Thr Cys
20      25      30

```

```

Asn Gln Thr Lys Leu Phe Asn Ser Gly Asn Phe Glu Lys Gly Phe Ile
35      40      45

```

```

Phe Gly Val Ala Ser Ser Ala Tyr Gln Val Glu Gly Gly Arg Gly Arg
Page 267

```

50

55

60

Gly Leu Asn Val Trp Asp Ser Phe Thr His Arg Phe Pro Glu Lys Gly  
 65 70 75 80  
 Gly Ala Asp Leu Gly Asn Gly Asp Thr Thr Cys Asp Ser Tyr Thr Leu  
 85 90  
 Trp Gln Lys Asp Ile Asp Val Met Asp Glu Leu Asn Ser Thr Gly Tyr  
 100 105 110  
 Arg Phe Ser Ile Ala Trp Ser Arg Leu Leu Pro Lys Gly Lys Arg Ser  
 115 120 125  
 Arg Gly Val Asn Pro Gly Ala Ile Lys Tyr Tyr Asn Gly Leu Ile Asp  
 130 135 140  
 Gly Leu Val Ala Lys Asn Met Thr Pro Phe Val Thr Leu Phe His Trp  
 145 150 155 160  
 Asp Leu Pro Gln Thr Leu Gln Asp Glu Tyr Asn Gly Phe Leu Asn Lys  
 165 170 175  
 Thr Ile Val Asp Asp Phe Lys Asp Tyr Ala Asp Leu Cys Phe Glu Leu  
 180 185 190  
 Phe Gly Asp Arg Val Lys Asn Trp Ile Thr Ile Asn Gln Leu Tyr Thr  
 195 200 205  
 Val Pro Thr Arg Gly Tyr Ala Leu Gly Thr Asp Ala Pro Gly Arg Cys  
 210 215 220  
 Ser Pro Lys Ile Asp Val Arg Cys Pro Gly Gly Asn Ser Ser Thr Glu  
 225 230 235 240  
 Pro Tyr Ile Val Ala His Asn Gln Leu Leu Ala His Ala Ala Val  
 245 250 255  
 Asp Val Tyr Arg Thr Lys Tyr Lys Asp Asp Gln Lys Gly Met Ile Gly  
 260 265 270  
 Pro Val Met Ile Thr Arg Trp Phe Leu Pro Phe Asp His Ser Gln Glu  
 275 280 285  
 Ser Lys Asp Ala Thr Glu Arg Ala Lys Ile Phe Phe His Gly Trp Phe  
 290 295 300

047-E2F-PCT.ST25.txt

Met Gly Pro Leu Thr Glu Gly Lys Tyr Pro Asp Ile Met Arg Glu Tyr  
 305 310 315 320

Val Gly Asp Arg Leu Pro Glu Phe Ser Glu Thr Glu Ala Ala Leu Val  
 325 330 335

Lys Gly Ser Tyr Asp Phe Leu Gly Leu Asn Tyr Tyr Val Thr Gln Tyr  
 340 345 350

Ala Gln Asn Asn Gln Thr Ile Val Pro Ser Asp Val His Thr Ala Leu  
 355 360 365

Met Asp Ser Arg Thr Thr Leu Thr Ser Lys Asn Ala Thr Gly His Ala  
 370 375 380

Pro Gly Pro Pro Phe Asn Ala Ala Ser Tyr Tyr Tyr Pro Lys Gly Ile  
 385 390 395 400

Tyr Tyr Val Met Asp Tyr Phe Lys Thr Thr Tyr Gly Asp Pro Leu Ile  
 405 410 415

Tyr Val Thr Glu Asn Gly Phe Ser Thr Pro Gly Asp Glu Asp Phe Glu  
 420 425 430

Lys Ala Thr Ala Asp Tyr Lys Arg Ile Asp Tyr Leu Cys Ser His Leu  
 435 440 445

Cys Phe Leu Ser Lys Val Ile Lys Glu Lys Asn Val Asn Val Lys Gly  
 450 455 460

Tyr Phe Ala Trp Ser Leu Gly Asp Asn Tyr Glu Phe Cys Asn Gly Phe  
 465 470 475 480

Thr Val Arg Phe Gly Leu Ser Tyr Val Asp Phe Ala Asn Ile Thr Gly  
 485 490 495

Asp Arg Asp Leu Lys Ala Ser Gly Lys Trp Phe Gln Lys Phe Ile Asn  
 500 505 510

Val Thr Asp Glu Asp Ser Thr Asn Gln Asp Leu Leu Arg Ser Ser Val  
 515 520 525

Ser Ser Lys Asn Arg Asp Arg Lys Ser Leu Ala Asp Ala  
 530 535 540

<210> 181

<211> 2742

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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<400> 181
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gatccggaga cgaccactgg taataatcag gattcagaga aatacccaaa ccttaatccc    180
attccaaatg atccttccca attccagatt cctcagaate acacccctcc aattccctat    240
ccacccatcc cgcctcgtac catggccttc tcttcagcgg aagaagccgc tgctgagcgc    300
cgccgcgcta aacgtcgtct ccgaattgaa cctcctctcc acgctctccg tcgcgatcct    360
tcagctcctc ctccaaaacg tgatcccaac gcgccacggc ttccggattc aacttccgct    420
ctcgtcggcc aaaggcttaa ccttcacaac agagtccaat cactgatcag agcatcagat    480
ctcgacgtcg catcaaaagt cgctcgccag tctgtgtttt ccaatactcg acctactgtc    540
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tctctatttc agtatttctt taagcagtct aacatcgctc ccaatgtagt ctcatacaat    660
cagatcatca acgctcattg tgatgaaggg aatgtcgacg aagcccttga agtgtacaga    720
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ggtgatttgc ataaggctgt tgagtctttt gatgaattga agtctaagtg tactgtttat    960
gatgggattg tgaatgctac ctttatggag tactggtttg agaaagggaa cgataaggaa    1020
gctatggagt cttacaggct tttgttagat aagaaattca gaatgcattc accgactggt    1080
aatgtacttt tggaaagtgt tcttaagttt ggtaagaagg atgaagcttg ggctttgttt    1140
aatgagatgt tggataatca cgctcctccg aatatccttt cggtgaaatt ggatacgggt    1200
ggataaatgg tcaatgaatg tttcaagatg ggagagttta gtgaagctat taatacattc    1260
aagaaggctg gaagtaaggt cacctccaaa ccgttttgta tggattattt aggttactgt    1320
aacatagtaa caagattctg tgaacaaggg atgttaacag aagctgaag gttctttgct    1380
gaagggtgat ctgatctttt gcctgctgat gctccaagtc atagagcaat gatcgaatgt    1440
tatctcaagg cagagagaat tgacgatgct gtcaagatgt tggacaggat ggttgatgtg    1500
aatctacggg tggttgctga tttcggtgca agagtctttg gtgagctgat taagaatggt    1560
aagctcacgg aatctgcaga agttttgact aagatgggag agagggaacc aaaaccagat    1620
ccttccattt atgatgtggt ggttagaggt ctttgtgatg gtgatgcact tgaccaagcc    1680

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047-E2F-PCT.ST25.txt

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tctgttgccc ggcgggttag aaacgctggg cagtctggtg acactccacc tagggtagcc 1860
gcagtgtttg gaaccacacc tgcagctccg cagcagccta gagacagggc cccatggacg 1920
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tcaggtcatc agcaatcatg gactaatcag acagctggcc agcagcaacc ttgggctaata 2220
cagacgcctg gtcagcagca acagtgggct aatcaaacgc ctggtcagca gcaacaattg 2280
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tcaaactctg tggacagtca tcttcctcaa caacaggagc cagggccttc ccatgagtcg 2700
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<210> 182

<211> 913

<212> PRT

<213> Arabidopsis thaliana

<400> 182

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Met Ser Leu Ser His Leu Leu Arg Arg Leu Cys Thr Thr Thr Thr
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Thr Arg Ser Pro Leu Ser Ile Ser Phe Leu His Gln Arg Ile His Asn
20      25      30

```

```

Ile Ser Leu Ser Pro Ala Asn Glu Asp Pro Glu Thr Thr Thr Gly Asn
35      40      45

```

```

Asn Gln Asp Ser Glu Lys Tyr Pro Asn Leu Asn Pro Ile Pro Asn Asp

```

50

55

60

Pro Ser Gln Phe Gln Ile Pro Gln Asn His Thr Pro Pro Ile Pro Tyr  
 65 70 75 80  
 Pro Pro Ile Pro His Arg Thr Met Ala Phe Ser Ser Ala Glu Glu Ala  
 85 90 95  
 Ala Ala Glu Arg Arg Arg Lys Arg Arg Leu Arg Ile Glu Pro Pro  
 100 105 110  
 Leu His Ala Leu Arg Arg Asp Pro Ser Ala Pro Pro Lys Arg Asp  
 115 120 125  
 Pro Asn Ala Pro Arg Leu Pro Asp Ser Thr Ser Ala Leu Val Gly Gln  
 130 135 140  
 Arg Leu Asn Leu His Asn Arg Val Gln Ser Leu Ile Arg Ala Ser Asp  
 145 150 155 160  
 Leu Asp Ala Ala Ser Lys Leu Ala Arg Gln Ser Val Phe Ser Asn Thr  
 165 170 175  
 Arg Pro Thr Val Phe Thr Cys Asn Ala Ile Ile Ala Ala Met Tyr Arg  
 180 185 190  
 Ala Lys Arg Tyr Ser Glu Ser Ile Ser Leu Phe Gln Tyr Phe Phe Lys  
 195 200 205  
 Gln Ser Asn Ile Val Pro Asn Val Val Ser Tyr Asn Gln Ile Ile Asn  
 210 215 220  
 Ala His Cys Asp Glu Gly Asn Val Asp Glu Ala Leu Glu Val Tyr Arg  
 225 230 235 240  
 His Ile Leu Ala Asn Ala Pro Phe Ala Pro Ser Ser Val Thr Tyr Arg  
 245 250 255  
 His Leu Thr Lys Gly Leu Val Gln Ala Gly Arg Ile Gly Asp Ala Ala  
 260 265 270  
 Ser Leu Leu Arg Glu Met Leu Ser Lys Gly Gln Ala Ala Asp Ser Thr  
 275 280 285  
 Val Tyr Asn Asn Leu Ile Arg Gly Tyr Leu Asp Leu Gly Asp Phe Asp  
 290 295 300

047-E2F-PCT.ST25.txt

Lys Ala Val Glu Phe Phe Asp Glu Leu Lys Ser Lys Cys Thr Val Tyr  
 305 310 315 320  
 Asp Gly Ile Val Asn Ala Thr Phe Met Glu Tyr Trp Phe Glu Lys Gly  
 325 330 335  
 Asn Asp Lys Glu Ala Met Glu Ser Tyr Arg Ser Leu Leu Asp Lys Lys  
 340 345 350  
 Phe Arg Met His Pro Pro Thr Gly Asn Val Leu Leu Glu Val Phe Leu  
 355 360 365  
 Lys Phe Gly Lys Lys Asp Glu Ala Trp Ala Leu Phe Asn Glu Met Leu  
 370 375 380  
 Asp Asn His Ala Pro Pro Asn Ile Leu Ser Val Asn Ser Asp Thr Val  
 385 390 395 400  
 Gly Ile Met Val Asn Glu Cys Phe Lys Met Gly Glu Phe Ser Glu Ala  
 405 410 415  
 Ile Asn Thr Phe Lys Lys Val Gly Ser Lys Val Thr Ser Lys Pro Phe  
 420 425 430  
 Val Met Asp Tyr Leu Gly Tyr Cys Asn Ile Val Thr Arg Phe Cys Glu  
 435 440 445  
 Gln Gly Met Leu Thr Glu Ala Glu Arg Phe Phe Ala Glu Gly Val Ser  
 450 455 460  
 Arg Ser Leu Pro Ala Asp Ala Pro Ser His Arg Ala Met Ile Asp Ala  
 465 470 475 480  
 Tyr Leu Lys Ala Glu Arg Ile Asp Asp Ala Val Lys Met Leu Asp Arg  
 485 490 495  
 Met Val Asp Val Asn Leu Arg Val Val Ala Asp Phe Gly Ala Arg Val  
 500 505 510  
 Phe Gly Glu Leu Ile Lys Asn Gly Lys Leu Thr Glu Ser Ala Glu Val  
 515 520 525  
 Leu Thr Lys Met Gly Glu Arg Glu Pro Lys Pro Asp Pro Ser Ile Tyr  
 530 535 540  
 Asp Val Val Val Arg Gly Leu Cys Asp Gly Asp Ala Leu Asp Gln Ala  
 545 550 555 560

047-E2F-PCT.ST25.txt

Lys Asp Ile Val Gly Glu Met Ile Arg His Asn Val Gly Val Thr Thr  
 565 570 575  
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 580 585 590  
 Glu Glu Ile Glu Lys Ile Leu Asn Ser Val Ala Arg Pro Val Arg Asn  
 595 600 605  
 Ala Gly Gln Ser Gly Asn Thr Pro Pro Arg Val Pro Ala Val Phe Gly  
 610 615 620  
 Thr Thr Pro Ala Ala Pro Gln Gln Pro Arg Asp Arg Ala Pro Trp Thr  
 625 630 635 640  
 Ser Gln Gly Val Val His Ser Asn Ser Gly Trp Ala Asn Gly Thr Ala  
 645 650 655  
 Gly Gln Thr Ala Gly Gly Ala Tyr Lys Ala Asn Asn Gly Gln Asn Pro  
 660 665 670  
 Ser Trp Ser Asn Thr Ser Asp Asn Gln Gln Gln Gln Ser Trp Ser Asn  
 675 680 685  
 Gln Thr Ala Gly Gln Gln Pro Pro Ser Trp Ser Arg Gln Ala Pro Gly  
 690 695 700  
 Tyr Gln Gln Gln Gln Ser Trp Ser Gln Gln Ser Gly Trp Ser Ser Pro  
 705 710 715 720  
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 725 730 735  
 Pro Trp Ala Asn Gln Thr Pro Gly Gln Gln Gln Gln Trp Ala Asn Gln  
 740 745 750  
 Thr Pro Gly Gln Gln Gln Gln Leu Ala Asn Gln Thr Pro Gly Gln Gln  
 755 760 765  
 Gln Gln Trp Ala Asn Gln Thr Pro Gly Gln Gln Gln Gln Trp Ala Asn  
 770 775 780  
 Gln Asn Asn Gly His Gln Gln Pro Trp Ala Asn Gln Asn Thr Gly His  
 785 790 795 800  
 Gln Gln Ser Trp Ala Asn Gln Thr Pro Ser Gln Gln Gln Pro Trp Ala  
 805 810 815



Asn Gln Thr Thr Gly Gln Gln Gln Gly Trp Gly Asn Gln Thr Thr Gly  
                   820                  825                  830  
 Gln Gln Gln Gln Trp Ala Asn Gln Thr Ala Gly Gln Gln Ser Gly Trp  
                   835                  840                  845  
 Thr Ala Gln Gln Gln Trp Ser Asn Gln Thr Ala Ser His Gln Gln Ser  
                   850                  855                  860  
 Gln Trp Leu Asn Pro Val Pro Gly Glu Val Ala Asn Gln Thr Pro Trp  
                   865                  870                  875                  880  
 Ser Asn Ser Val Asp Ser His Leu Pro Gln Gln Gln Glu Pro Gly Pro  
                   885                  890                  895  
 Ser His Glu Cys Gln Glu Thr Gln Glu Lys Lys Val Val Glu Leu Arg  
                   900                  905                  910

Asn

<210> 183

<211> 804

<212> DNA

<213> *Arabidopsis thaliana*

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 tgtcacaacg agagcactag cacattgcgc aatatctacg accgtcacga tcttgttcgt 180  
 caagacgtta aacaagtgat ttgttctggt tgcgatacag agcagccggc agctcaagtt 240  
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 cgtgagaatt tcttcattg caagaagtgt ggatcttggt atcggttggt tctgcgaac 420  
 aaccatcgct gcgttgagaa ttcaatgcgt catcactgtc ccatttgtaa cgagtacctt 480  
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gattaccgtg acaagaaggt ttggatactt tgcaacgatt gtaacgacac aacagaagtg 720  
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<211> 267

<212> PRT

<213> Arabidopsis thaliana

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Asn Glu Val Phe Asp Cys Arg His Cys His Asn Glu Ser Thr Ser Thr  
 35 40 45

Leu Arg Asn Ile Tyr Asp Arg His Asp Leu Val Arg Gln Asp Val Lys  
 50 55 60

Gln Val Ile Cys Ser Val Cys Asp Thr Glu Gln Pro Ala Ala Gln Val  
 65 70 75 80

Cys Ser Asn Cys Gly Val Asn Met Gly Glu Tyr Phe Cys Ser Ile Cys  
 85 90 95

Ile Phe Tyr Asp Asp Asp Thr Glu Lys Gln Gln Phe His Cys Asp Asp  
 100 105 110

Cys Gly Ile Cys Arg Val Gly Gly Arg Glu Asn Phe Phe His Cys Lys  
 115 120 125

Lys Cys Gly Ser Cys Tyr Ala Val Gly Leu Arg Asn Asn His Arg Cys  
 130 135 140

Val Glu Asn Ser Met Arg His His Cys Pro Ile Cys Tyr Glu Tyr Leu  
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Phe Asp Ser Leu Lys Asp Thr Asn Val Met Lys Cys Gly His Thr Met  
 165 170 175

His Val Glu Cys Tyr Asn Glu Met Ile Lys Arg Asp Lys Phe Cys Cys  
 180 185 190

Pro Ile Cys Ser Arg Ser Val Ile Asp Met Ser Lys Thr Trp Gln Arg  
 195 200 205

Leu Asp Glu Glu Ile Glu Ala Thr Ala Met Pro Ser Asp Tyr Arg Asp  
 210 215 220

Lys Lys Val Trp Ile Leu Cys Asn Asp Cys Asn Asp Thr Thr Glu Val  
 225 230 235 240

His Phe His Ile Ile Gly Gln Lys Cys Gly His Cys Arg Ser Tyr Asn  
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<212> PRT

<213> Arabidopsis thaliana

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 20 25 30

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 35 40 45

His His Leu Ala Ser Asn Glu Ile Leu Trp Ser Lys Ile Cys Arg Ser  
 50 55 60

Thr Trp Pro Ser Cys Ser Gly Gly Ser Arg Ser Phe Phe Ser Asp Ala  
 65 70 75 80

Tyr Ser Met Val Glu Thr Ala Gly Thr Val Ser Asp Leu Asp Arg Pro  
 85 90 95

Phe Pro Glu Leu Ile Ser Ala Val Asp Leu His Tyr Arg Gly Lys Leu  
 100 105 110

Ile Phe Ser Arg Val Val Lys Thr Glu Thr Thr Thr Ala Trp Phe Lys  
 115 120 125

Ser Ser Pro Leu Arg Ile Asp Leu Val Asp Thr Lys Asp Thr Val Ala  
 130 135 140

Thr Pro Ile Lys Arg Arg Gln Arg Thr Glu Asp Thr Cys Arg Asp Leu  
 145 150 155 160

Glu Lys Asp Leu Thr Leu Ser Trp Ile Val Ile Asp Pro Ile Gly Lys  
 165 170 175

Arg Ala Ala Asn Ile Ser Ser His Arg Pro Val Ser Val Gln Arg Asn  
 180 185 190

Trp Ile Ser Gly Glu Val Glu Ala Gln Phe Ala Thr Val Val Gly Ala  
 195 200 205

Val Glu Cys Val Ile Thr Val Val Thr Cys Gly Glu Glu Glu Met His  
 210 215 220

Val Arg Glu Val Ser Leu Lys Val Glu Lys Met Glu Gly Thr His Leu  
 225 230 235 240

Asn Gly Arg Asp Ser Leu Val Ile Leu Arg Ser Val Met Glu Gly Lys  
 245 250 255

Arg Val Asn Gly Ser Arg Arg Glu Val Glu Ser Lys Lys Arg His Glu  
 260 265 270

Glu Phe Met Glu Lys Lys Arg Glu Met Lys Glu Lys Lys Met Arg Val  
 275 280 285

Glu Ser Val Phe Asp Ile Leu Thr Val Ala Phe Gly Ile Leu Gly Phe  
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<211> 1428

<212> DNA

<213> Arabidopsis thaliana

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 acttttgtga tagagcaacg ttgggagttt gttgagaatc agacgttccg tgctgctgaa 240  
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 ctaccgaaa aacggctactt tcatttgaca tgtaagaagg agtttcgtga gaagataatg 480  
 acggattact tcacttactt agcgaaatca gcggagaaga taatgagcca tcgcgagaat 540

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&lt;210&gt; 188

&lt;211&gt; 475

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 188

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Leu Tyr Thr Ser Phe Ser Ala Ile Thr Met Leu Phe Arg Thr Ile Leu
20          25          30

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Asn Glu Ile Val Pro Lys Arg Ile Arg Glu Tyr Ile Ala Met Lys Ala
35          40          45

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Val Asp Phe Phe Ser Ser Tyr Phe Gln Ser Asp Phe Thr Phe Val Ile
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Glu Gln Arg Trp Glu Phe Val Glu Asn Gln Thr Phe Arg Ala Ala Glu
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Val Tyr Leu Pro Thr Cys Leu Ala Gly Leu Ser Thr Gly Lys Leu Leu  
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Val Gly Ser Ser Asn Leu Lys Asn Pro Ala Ala Glu Pro Lys Leu Gly  
100 105 110

Ile Pro Val Asn Thr Lys Ile Ile Asp Asn Phe Glu Gly Ile His Leu  
115 120 125

Glu Trp Thr Leu His Ser Val Glu Thr Lys Lys Tyr Leu Pro Glu Lys  
130 135 140

Arg Tyr Phe His Leu Thr Cys Lys Lys Glu Phe Arg Glu Lys Ile Met  
145 150 155 160

Thr Asp Tyr Phe Thr Tyr Leu Ala Lys Ser Ala Glu Lys Ile Met Ser  
165 170 175

His Arg Glu Asn Leu Lys Ile Tyr Thr Tyr Asn Gln Asp Arg Ser Lys  
180 185 190

Trp Glu Ser Ala Ile Phe Glu His His Thr Thr Phe Glu Thr Leu Ala  
195 200 205

Val Glu Pro Asp Leu Lys Lys Thr Leu Ile Asp Asp Leu Asp Ala Phe  
210 215 220

Ser Lys Gly Lys Asp Phe Phe Lys Ser Val Gly Arg Ala Trp Lys Arg  
225 230 235 240

Gly Tyr Leu Leu Tyr Gly Pro Pro Gly Thr Gly Lys Ser Ser Met Val  
245 250 255

Ala Ala Ile Ala Asn His Met Lys Tyr His Ile Tyr Asp Leu Gln Ile  
260 265 270

Gln Ser Val Arg Asp Asp Gly Glu Leu Arg Glu Ile Leu Thr Ser Thr  
275 280 285

Lys Asn Arg Ser Ile Leu Leu Ile Glu Asp Ile Asp Cys Gly Ala Asp  
290 295 300

Ala Ser Arg Arg Arg Gln Ser Lys Lys Lys Glu Glu Asp Gly Gly Glu  
305 310 315 320

Asp Asp Gly Glu Pro Gln Lys Arg Lys Lys Lys Phe Glu Val Gly Ile  
325 330 335

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Ser Leu Ser Gly Leu Leu Asn Phe Val Asp Gly Leu Trp Ser Ser Cys  
340 345 350

Gly Glu Glu Lys Ile Ile Ile Phe Thr Thr Asn His Lys Glu Lys Leu  
355 360 365

Asp Pro Ala Leu Leu Arg Pro Gly Arg Met Asp Val His Ile Leu Met  
370 375 380

Asp Asn Cys Thr Pro Phe Val Phe Lys Lys Leu Val Ala Leu Tyr Leu  
385 390 395 400

Lys Thr Asp Glu His Val Leu Phe Asp Pro Ile Glu Lys Leu Ile Leu  
405 410 415

Glu Val Ser Ser Thr Pro Ala Glu Val Thr Gln Gln Leu Met Ala Ser  
420 425 430

Lys Asn Ala Asp Ile Ala Leu Lys Gly Leu Ala Glu Phe Leu Glu Asn  
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<211> 599

<212> PRT

<213> Arabidopsis thaliana

<400> 190

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 Page 283

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Pro Thr Pro Ser Arg Gly Gly Ser Asn Val Asn Phe Asp Arg Ala Leu  
50 55 60

Thr Ser Leu Glu Arg Gln Ile Ser Ser Tyr Ile Val Glu Asp Arg Pro  
65 70 75 80

Ile Trp Ser Asp Pro Val Asp Ser Arg Thr Phe Leu Asp Ser Val Asp  
85 90 95

Glu Leu Leu Ala Ile Ala Gly Asp Leu Arg Ser Met Ala Gly Asp Lys  
100 105 110

Ser Val Ala Val Cys Gln Ser Arg Ala Asp Glu Leu Ile Gln Gln Val  
115 120 125

Met Phe Arg Leu Gln Glu Glu Phe Gly Phe Val Met Asp Arg Ala Pro  
130 135 140

Asp Ser Phe Asp Ser Asp Asp Glu Phe Pro Gly Glu Glu Asp Asn Asp  
145 150 155 160

Thr Ser Asp Gly Val Ile Val Ala Arg Pro Ile Thr Asp Tyr Lys Ile  
165 170 175

Val Ile Glu Ala Leu Gln Ser Ser Val Ile Gly Asp Leu Asn Ala Ile  
180 185 190

Ala Val Arg Met Val Ala Gly Gly Phe Ala Lys Glu Cys Ser Arg Val  
195 200 205

Tyr Ser Ser Arg Arg Arg Glu Phe Leu Glu Glu Ser Leu Ser Arg Leu  
210 215 220

His Leu Arg Gly Leu Ser Met Glu Glu Val Gln Glu Ser Pro Trp Gln  
225 230 235 240

Asp Leu Glu Asp Glu Ile Asp Arg Trp Ile Lys Ala Val Thr Leu Ile  
245 250 255

Phe His Val Phe Phe Pro Ser Glu Arg Leu Leu Cys Asp Arg Val Phe  
260 265 270

Ser Asp Leu Pro Val Ser Ser Val Thr Asp Leu Ser Phe Met Glu Val  
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 Cys Arg Gly Thr Thr Thr Gln Leu Leu Asn Phe Ala Asp Ala Ile Ala  
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 Ile Thr Arg Tyr Val Met Asn Tyr Leu Arg Ala Ala Cys Lys Ser Arg  
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 Asp Thr Arg Pro Leu Ser Val Gln Ile Ile Trp Val Leu Glu Leu Leu  
 420 425 430  
 Glu Ser Asn Leu Glu Gly Lys Lys Arg Thr Tyr Arg Asp Pro Ser Leu  
 435 440 445  
 Cys Phe Leu Phe Met Met Asn Asn Asp Lys Tyr Ile Leu Asp Lys Ala  
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 Lys Asp Asn Glu Leu Gly Leu Val Leu Gly Glu Asp Trp Ile Val Lys  
 465 470 475 480  
 His Ala Ala Lys Leu Arg Gln Tyr His Ser Asn Tyr Arg Arg Ser Ser  
 485 490 495  
 Trp Asn Gln Val Val Gly Leu Leu Arg Thr Asp Gly Pro Tyr Pro Lys  
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 Leu Val Glu Asn Leu Arg Leu Phe Lys Ser Gln Phe Asp Glu Val Cys  
 515 520 525

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Lys Val Gln Ser Gln Trp Val Val Ser Asp Gly Gln Leu Arg Glu Glu  
530 535 540

Leu Arg Ser Ser Val Ala Gly Ile Val Ser Pro Ala Tyr Ser Asn Phe  
545 550 555 560

Ile Arg Arg Leu Lys Glu Ser Pro Glu Ile Asn Gly Arg Arg Gly Glu  
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Pro Phe Ile Pro Tyr Thr Val Glu Asp Val Glu Phe Ile Ile Lys Arg  
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<211> 2037

<212> DNA

<213> Arabidopsis thaliana

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<212> PRT

<213> Arabidopsis thaliana

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 20 25 30

Ser Asn Asp Asp Leu Asn Ser Gly Gly Asp Asp Asn Gly Val Gly Glu  
 35 40 45

Ser Ser Asp Phe Asp Glu Phe Gly Glu Ser Glu Pro Lys Ser Glu Glu  
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50

55

60

Glu Leu Asp Pro Gly Ser Trp Arg Ser Ile Phe Glu Pro Asp Asp Ser  
 65 70 75 80  
 Thr Val Gln Ala Ala Ser Pro Gln Tyr Tyr Ser Gly Leu Lys Lys Ile  
 85 90  
 Leu Ser Ala Ala Ser Glu Gly Asn Phe Arg Leu Met Glu Glu Ala Val  
 100 105 110  
 Asp Glu Ile Glu Ala Ala Ser Ser Ala Gly Asp Pro His Ala Gln Ser  
 115 120 125  
 Ile Met Gly Phe Val Tyr Gly Ile Gly Met Met Arg Glu Lys Ser Lys  
 130 135 140  
 Ser Lys Ser Phe Leu His His Asn Phe Ala Ala Ala Gly Gly Asn Met  
 145 150 155 160  
 Gln Ser Lys Met Ala Leu Ala Phe Thr Tyr Leu Arg Gln Asp Met His  
 165 170 175  
 Asp Lys Ala Val Gln Leu Tyr Ala Glu Leu Ala Glu Thr Ala Val Asn  
 180 185 190  
 Ser Phe Leu Ile Ser Lys Asp Ser Pro Val Val Glu Pro Thr Arg Ile  
 195 200 205  
 His Ser Gly Thr Glu Glu Asn Lys Gly Ala Leu Arg Lys Ser Arg Gly  
 210 215 220  
 Glu Glu Asp Glu Asp Phe Gln Ile Leu Glu Tyr Gln Ala Gln Lys Gly  
 225 230 235 240  
 Asn Ala Asn Ala Met Tyr Lys Ile Gly Leu Phe Tyr Tyr Phe Gly Leu  
 245 250 255  
 Arg Gly Leu Arg Arg Asp His Thr Lys Ala Leu His Trp Phe Leu Lys  
 260 265 270  
 Ala Val Asp Lys Gly Glu Pro Arg Ser Met Glu Leu Leu Gly Glu Ile  
 275 280 285  
 Tyr Ala Arg Gly Ala Gly Val Glu Arg Asn Tyr Thr Lys Ala Leu Glu  
 290 295 300

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Trp Leu Thr Leu Ala Ala Lys Glu Gly Leu Tyr Ser Ala Phe Asn Gly  
305 310 315 320

Ile Gly Tyr Leu Tyr Val Lys Gly Tyr Gly Val Asp Lys Lys Asn Tyr  
325 330 335

Thr Lys Ala Arg Glu Tyr Phe Glu Lys Ala Val Asp Asn Glu Asp Pro  
340 345 350

Ser Gly His Tyr Asn Leu Gly Val Leu Tyr Leu Lys Gly Ile Gly Val  
355 360 365

Asn Arg Asp Val Arg Gln Ala Thr Lys Tyr Phe Phe Val Ala Ala Asn  
370 375 380

Ala Gly Gln Pro Lys Ala Phe Tyr Gln Leu Ala Lys Met Phe His Thr  
385 390 395 400

Gly Val Gly Leu Lys Lys Asn Leu Glu Met Ala Thr Ser Phe Tyr Lys  
405 410 415

Leu Val Ala Glu Arg Gly Pro Trp Ser Ser Leu Ser Arg Trp Ala Leu  
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Arg Ala Ser Glu Gln Gly Asn Glu His Ala Ala Leu Leu Ile Gly Asp  
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Ala Tyr Tyr Tyr Gly Arg Gly Thr Glu Arg Asp Phe Val Arg Ala Ala  
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Glu Ala Tyr Met His Ala Lys Ser Gln Ser Asn Ala Gln Ala Met Phe  
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Asn Leu Gly Tyr Met His Glu His Gly Gln Gly Leu Pro Phe Asp Leu  
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His Leu Ala Lys Arg Tyr Tyr Asp Glu Ser Leu Gln Ser Asp Ala Ala  
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Asn Tyr Ala Asp Thr Val Leu Val Arg Val Val Asp Ser Leu Pro Glu  
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Gly Asn Ala Thr Ile Leu Thr Leu Phe Val Cys Leu Ile Thr Ile Leu  
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&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 194

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 Ser Asp Ser Val Ser Gly Gln Thr Val Val Asp Pro Lys Gly Tyr Leu  
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Cys Pro Lys Asn Glu Asp Val Trp Leu Glu Ala Cys Arg Leu Ala Asn  
420 425 430

Pro Glu Asp Ala Lys Gly Val Ile Ala Lys Gly Val Lys Leu Ile Pro  
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Asn Ser Val Lys Leu Trp Leu Glu Ala Ala Lys Leu Glu His Asp Val  
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Glu Asn Lys Ser Arg Val Leu Arg Lys Gly Leu Glu His Ile Pro Asp  
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Ala Arg Ile Leu Leu His Arg Ala Val Glu Cys Cys Pro Leu His Leu  
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Lys Val Leu Asn Lys Ala Arg Glu Lys Leu Pro Lys Glu Pro Ala Ile  
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Trp Ile Thr Ala Ala Lys Leu Glu Glu Ala Asn Gly Lys Leu Asp Glu  
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Lys Thr Leu Gln Arg Glu Gly Val Val Ile Asp Arg Glu Asn Trp Met  
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Ala Ile Ile Lys Asn Thr Ile Gly Ile Gly Val Glu Glu Glu Asp Arg  
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 Ala Ile Leu Thr Thr Ala Arg Lys Lys Asn Pro Gly Gly Ala Glu Leu  
 850 855 860  
 Trp Leu Ala Ala Ile Arg Ala Glu Leu Arg His Asp Asn Lys Arg Glu  
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Glu Ala Tyr Ser Ile Ala Ser Gly Leu Lys Pro Lys Gly Asn Gly Asn
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Gly Val Asp Glu Tyr Asn Asn Gly Asn Asn Met Gly Ile Leu Asp Ser  
165 170 175

Leu Ile Gly Ser Ile Met Gly Met Ala Gln Pro Gly Ser Glu Ile Leu  
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Ser Arg Leu His Leu Ser Val Val Leu Ser Tyr Gly Ser Val Thr Asp  
195 200 205

Lys Asp Val Ser Val Phe Pro Ile Lys Thr Pro Gln Glu Asp Ile Asn  
210 215 220

Pro Ala Phe Ile Gly Leu Val Pro Arg Gln Ser Tyr Thr Met Arg Gly  
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245 250 255

Gln Trp Gln His Gly Val Thr Arg Lys Asp Leu Val Asp Thr Leu Ser  
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Phe Glu Ala Leu Lys Lys Leu Cys Gly Asn Leu Val Ile Pro Ala Asp  
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Page 309

1850

1855

1860

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1395

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Val Thr Tyr Glu Ser Leu Val Lys Met Trp Phe Met Pro Val Asn Val  
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Leu Leu Thr Phe Ile Ile Gly Ser Leu Leu Gly Trp Ile Val Ile Val  
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Ile Thr Lys Pro Pro Ser His Leu Arg Gly Leu Ile Leu Gly Cys Cys  
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Ala Ala Gly Asn Leu Gly Asn Met Pro Leu Ile Ile Ile Pro Ala Val  
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Cys Lys Glu Lys Gly Gly Pro Phe Gly Asp Pro Glu Ser Cys Gln Lys  
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Tyr Gly Met Gly Tyr Val Ala Leu Ser Met Ala Met Gly Ser Ile Tyr  
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Ile Trp Thr Tyr Val Tyr Asn Leu Met Arg Val Leu Ser Asn Ser Pro  
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Val Glu Thr Pro Pro Ser Val Glu Ser Asn Tyr Asp Ser Tyr Lys Val  
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Pro Leu Ile Ser Ser Lys Glu Glu Glu Asn Asn Gln Lys Ala Gly Arg  
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Trp Glu Lys Val Lys Arg Arg Leu Val Ser Leu Ser Gln Lys Val Asn  
210 215 220

Leu Lys Thr Ile Phe Ala Pro Ser Thr Ile Ala Ala Met Ile Ala Leu  
225 230 235 240

Val Ile Gly Leu Ile Thr Pro Leu Arg Lys Leu Ile Ile Gly Thr Gly  
245 250 255

Ala Pro Leu Arg Val Leu Gln Asp Ser Val Thr Leu Val Gly Asp Gly  
260 265 270

Ala Val Pro Ala Met Thr Met Ile Ile Gly Gly Asn Leu Leu Lys Gly  
275 280 285

Leu Arg Ser Ser Gly Met Lys Met Ser Ser Ile Ile Gly Val Leu Val  
290 295 300

Ala Arg Tyr Val Leu Leu Pro Met Ser Gly Val Leu Ile Val Arg Gly  
305 310 315 320

Ala Tyr Lys Leu Asp Leu Val Thr Ser Glu Pro Leu Tyr Gln Phe Val  
325 330 335

Leu Leu Leu Gln Tyr Ala Val Pro Pro Ala Met Asn Leu Gly Thr Ile  
340 345 350

Thr Gln Leu Phe Gly Thr Gly Glu Ser Glu Cys Ser Val Ile Met Leu  
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<211> 1407

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<213> *Arabidopsis thaliana*

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gcagaaagct ataattacc tctccacct tcttatgcc aacctctga gtatacgcaa    180
cctcctcctc ctttatatag tactcagcct tactctgctc cgtcttattc tgcaccgcct    240
tctcaaagtt atggtagtga taataagaag aggttggagc gcaagtattc gaaaatttct    300
gatgattact cttctttgga gcaggtgacg gaggctcttg cacggggcgg tctagaatct    360
tcaaattcta tcgttggtat tgatttcact aagagtaacg aatggacagg gccagggtcc    420
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gataaccagc tatgtccgat ttgtttgagc aaccgaaaag acatggcctt tggttgtggc   1320
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&lt;210&gt; 206

&lt;211&gt; 468

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 206

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 Pro Pro Ser Tyr Ala Gln Pro Pro Glu Tyr Thr Gln Pro Pro Pro Pro  
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 Leu Tyr Ser Thr Gln Pro Tyr Ser Ala Pro Ser Tyr Ser Ala Pro Pro  
 65 70 75 80  
 Ser Gln Ser Tyr Gly Ser Asp Asn Lys Lys Arg Leu Glu Arg Lys Tyr  
 85 90 95  
 Ser Lys Ile Ser Asp Asp Tyr Ser Ser Leu Glu Gln Val Thr Glu Ala  
 100 105 110  
 Leu Ala Arg Ala Gly Leu Glu Ser Ser Asn Leu Ile Val Gly Ile Asp  
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 Phe Thr Lys Ser Asn Glu Trp Thr Gly Ala Arg Ser Phe Asn Arg Lys  
 130 135 140  
 Ser Leu His Phe Ile Gly Ser Ser Pro Asn Pro Tyr Glu Gln Ala Ile  
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 Thr Ile Ile Gly Arg Thr Leu Ala Ala Phe Asp Glu Asp Asn Leu Ile  
 165 170 175  
 Pro Cys Tyr Gly Phe Gly Asp Ala Ser Thr His Asp Gln Asp Val Phe  
 180 185 190  
 Ser Phe Asn Ser Glu Asp Arg Phe Cys Asn Gly Phe Glu Glu Val Leu  
 195 200 205  
 Ser Arg Tyr Lys Glu Ile Val Pro Gln Leu Lys Leu Ala Gly Pro Thr  
 210 215 220  
 Ser Phe Ala Pro Ile Ile Asp Met Ala Met Thr Ile Val Glu Gln Ser  
 225 230 235 240

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Gly Gly Gln Tyr His Val Leu Val Ile Ile Ala Asp Gly Gln Val Thr  
245 250 255

Arg Ser Val Asp Thr Glu Asn Gly Gln Leu Ser Pro Gln Glu Gln Lys  
260 265 270

Thr Val Asp Ala Ile Val Gln Ala Ser Lys Leu Pro Leu Ser Ile Val  
275 280 285

Leu Val Gly Val Gly Asp Gly Pro Trp Asp Met Met Arg Glu Phe Asp  
290 295 300

Asp Asn Ile Pro Ala Arg Ala Phe Asp Asn Phe Gln Phe Val Asn Phe  
305 310 315 320

Thr Glu Ile Met Ala Lys Asn Lys Ala Gln Ser Leu Lys Glu Thr Glu  
325 330 335

Phe Ala Leu Ser Ala Leu Met Glu Ile Pro Gln Gln Tyr Lys Ala Thr  
340 345 350

Ile Glu Leu Asn Leu Leu Gly Arg Arg Asn Gly Tyr Ile Pro Glu Arg  
355 360 365

Phe Pro Leu Pro Pro Pro Met Arg Gly Gly Ser Ser Ser Tyr Asn Ser  
370 375 380

Pro Lys Pro Ser Arg Leu Pro Ser Phe Lys Pro Ser Val Pro Pro His  
385 390 395 400

Pro Thr Glu Gly Tyr His Val Arg Ser Ser Pro Val Pro Pro Pro Thr  
405 410 415

Ser Ser Ala Ser Asp Asn Gln Leu Cys Pro Ile Cys Leu Ser Asn Pro  
420 425 430

Lys Asp Met Ala Phe Gly Cys Gly His Gln Thr Cys Cys Glu Cys Gly  
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Pro Asp Leu Gln Met Cys Pro Ile Cys Arg Ala Pro Ile Gln Thr Arg  
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Ile Lys Leu Tyr  
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<211> 1671

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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ccaatcttga aatgcttagt gacaatatgt ttggaatagt cctttttgtt gttcatagaa   240
agagtttata tgagcatagt agtagtgttt gtgaaattac ttagacgaac acctgagaaa   300
gtacacaagt gggaaacctat aaacgatgat gaccttgagc ttgccaatac aaactaccca   360
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&lt;210&gt; 208

&lt;211&gt; 556

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 208

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50 55 60Cys Leu Val Thr Ile Cys Leu Val Met Ser Leu Leu Leu Phe Ile Glu  
65 70 75 80Arg Val Tyr Met Ser Ile Val Val Val Phe Val Lys Leu Leu Arg Arg  
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115 120 125Tyr Asn Glu Lys Glu Val Cys Gln Leu Ser Ile Gly Ala Ala Cys Arg  
130 135 140Leu Ser Trp Pro Leu Asp Arg Met Ile Val Gln Val Leu Asp Asp Ser  
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165 170 175Ala Arg Lys Gly Ile Asn Ile Met Ser Glu Ile Arg Asp Asn Arg Ile  
180 185 190Gly Tyr Lys Ala Gly Ala Leu Lys Ala Gly Met Met His Asn Tyr Val  
Page 331

195  
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 205

Lys Gln Cys Glu Phe Val Ala Ile Phe Asp Ala Asp Phe Gln Pro Asp  
 210 215 220

Pro Asp Phe Leu Glu Arg Thr Ile Pro Phe Leu Ile His Asn His Glu  
 225 230 235 240

Ile Ser Leu Val Gln Cys Arg Trp Lys Phe Val Asn Ala Asn Glu Cys  
 245 250 255

Leu Met Thr Arg Met Gln Glu Met Ser Leu Asn Tyr His Phe Val Ala  
 260 265 270

Glu Gln Glu Ser Gly Ser Ser Ile His Ala Phe Phe Gly Phe Asn Gly  
 275 280 285

Thr Ala Gly Val Trp Arg Ile Ala Ala Leu Asn Glu Ala Gly Gly Trp  
 290 295 300

Lys Asp Arg Thr Thr Val Glu Asp Met Asp Leu Ala Val Arg Ala Cys  
 305 310 315 320

Leu His Gly Trp Lys Phe Val Tyr Val His Asp Val Glu Val Lys Asn  
 325 330 335

Glu Leu Pro Ser Thr Phe Lys Ala Tyr Arg Phe Gln Gln His Arg Trp  
 340 345 350

Ser Cys Gly Pro Ala Asn Leu Trp Arg Lys Met Thr Met Glu Ile Leu  
 355 360 365

Gln Asn Lys Lys Val Ser Ala Trp Lys Lys Leu Tyr Leu Ile Tyr Asn  
 370 375 380

Phe Phe Phe Ile Arg Lys Ile Val Val His Ile Phe Thr Phe Val Phe  
 385 390 395 400

Tyr Cys Leu Ile Leu Pro Thr Thr Val Leu Phe Pro Glu Leu Gln Val  
 405 410 415

Pro Lys Trp Ala Thr Val Tyr Phe Pro Thr Thr Ile Thr Ile Leu Asn  
 420 425 430

Ala Ile Ala Thr Pro Arg Ser Leu His Leu Leu Val Phe Trp Ile Leu  
 435 440 445

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Phe Glu Asn Val Met Ser Met His Arg Thr Lys Ala Thr Phe Ile Gly  
450 455 460

Leu Leu Glu Ala Gly Arg Val Asn Glu Trp Val Val Thr Glu Lys Leu  
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Gly Asp Thr Leu Lys Ser Lys Leu Ile Gly Lys Ala Thr Thr Lys Leu  
485 490 495

Tyr Thr Arg Phe Gly Gln Arg Leu Asn Trp Arg Glu Leu Val Val Gly  
500 505 510

Leu Tyr Ile Phe Phe Cys Gly Cys Tyr Asp Phe Ala Tyr Gly Gly Ser  
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<213> Arabidopsis thaliana

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<211> 1103

<212> PRT

<213> Arabidopsis thaliana

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 35 40 45

Asn Leu Glu Leu Tyr Val Glu Arg Val Gln Asp Pro Asn Pro Glu Leu  
 50 55 60

Gln Lys Ile Ala Leu Glu Ser Met Arg Lys Glu Ile Arg Asp Ser Thr  
 65 70 75 80

Ser Ser Met Thr Ser Val Pro Lys Pro Leu Lys Phe Leu Arg Pro His  
 85 90 95

Tyr Gly Val Leu Lys Glu Phe His Ala Lys Met Ala Glu Ser Asp Leu  
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Lys Lys Met Leu Ala Asp Ile Leu Ser Val Leu Ala Leu Thr Met Ser  
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 645 650 655  
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 660 665 670  
 Gln Phe Ser Leu Thr Leu Gln Thr Ile Gln Thr Ile Gln Val Gln Asp  
 675 680 685  
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 His Asp Thr Asp Ser Glu Val Ala Met Ala Ala Ile Ile Ser Leu Gly  
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 Thr Tyr Asp Arg Leu Val Leu Ile Val Leu Ser His Asn Ala Gly Ala  
 835 840 845  
 His Arg Ser Arg Val Cys Ala Tyr Gly Lys Gly Ser Leu Asn Ser Gln  
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Ser Phe Pro Leu Arg Thr Ala Leu Ala Met Pro Thr Ala Leu Ala Gly  
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 Ile Val Thr Leu Leu His Ala Cys Leu Asp Met Lys Ser Ile Ile Leu  
 885 890 895  
 Gly Lys Tyr His Tyr Val Leu Tyr Phe Leu Val Leu Ala Met Gln Pro  
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 Arg Met Met Leu Thr Val Asp Gln Ser Leu Lys Pro Ile Ser Val Pro  
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 Val Arg Val Gly Gln Ala Val Asp Val Val Gly Gln Ala Gly Arg Pro  
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 Lys Thr Ile Thr Gly Phe Gln Thr His Ser Thr Pro Val Leu Leu Ala  
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 Ala Gly Glu Arg Ala Glu Leu Ala Thr Glu Lys Tyr Val Val Pro Leu  
 965 970 975  
 Ile Pro Leu Leu His Tyr Pro Thr Arg Asn Lys Thr Leu Phe Tyr Ile  
 980 985 990  
 Leu Glu Ser Lys Lys Thr Leu Leu Leu Phe Gly Ser Gln Val His Ser  
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 Arg Glu Arg Ala Phe Glu Tyr Phe His Tyr Gly Cys Gln Lys Phe  
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 Phe Ser Leu Phe Pro Ser Val Pro Arg Lys Trp Phe Thr Ile Ser  
 1055 1060 1065  
 Pro Phe Lys Arg Lys Asn Ser Phe Ile Ala Ile Tyr Arg Asn Phe  
 1070 1075 1080  
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&lt;211&gt; 966

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&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 211

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&lt;210&gt; 212

&lt;211&gt; 321

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 212

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Val Trp Ala Ala Thr Trp Val Pro Ala Thr Glu Asp Arg Pro Ala Leu  
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Leu Leu Thr Gly Ser Leu Asp Glu Thr Val Lys Leu Trp Arg Pro Asp  
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Glu Leu Asp Leu Val Arg Thr Asn Thr Gly His Ser Leu Gly Val Ala  
50 55 60

Ala Leu Ala Ala His Pro Ser Gly Ile Ile Ala Ala Ser Ser Ser Ile  
65 70 75 80

Asp Ser Phe Val Arg Val Phe Asp Val Asp Thr Asn Ala Thr Ile Ala  
85 90 95

Val Leu Glu Ala Pro Pro Ser Glu Val Trp Gly Met Gln Phe Glu Pro  
100 105 110

Lys Gly Thr Ile Leu Ala Val Ala Gly Gly Ser Ser Ala Ser Val Lys  
115 120 125

Leu Trp Asp Thr Ala Ser Trp Arg Leu Ile Ser Thr Leu Ser Ile Pro  
130 135 140

Arg Pro Asp Ala Pro Lys Pro Ser Asp Lys Thr Ser Ser Lys Lys Phe  
145 150 155 160

Val Leu Ser Val Ala Trp Ser Pro Asn Gly Lys Arg Leu Ala Cys Gly  
165 170 175

Ser Met Asp Gly Thr Ile Cys Val Phe Asp Val Asp Arg Ser Lys Leu  
180 185 190

Leu His Gln Leu Glu Gly His Asn Met Pro Val Arg Ser Leu Val Phe  
195 200 205

Ser Pro Val Asp Pro Arg Val Leu Phe Ser Gly Ser Asp Asp Gly His  
210 215 220

Val Asn Met His Asp Ala Glu Gly Lys Thr Leu Leu Gly Ser Met Ser  
225 230 235 240

Gly His Thr Ser Trp Val Leu Ser Val Asp Ala Ser Pro Asp Gly Gly  
245 250 255

Ala Ile Ala Thr Gly Ser Ser Asp Arg Thr Val Arg Leu Trp Asp Leu

Lys Met Arg Ala Ala Ile Gln Thr Met Ser Asn His Asn Asp Gln Val  
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<211> 321

<212> DNA

<213> Arabidopsis thaliana

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<211> 106

<212> PRT

<213> Arabidopsis thaliana

<400> 214

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 20 25 30

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 35 40 45

Pro Thr Thr Pro Gly Ser Ala Arg Lys Glu Asn Val Trp Arg Ser Val  
 50 55 60

Phe His Pro Gly Ser Asn Ile Ala Thr Arg Gly Met Gly Thr Asn Leu  
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Phe Asp Lys Pro Ser His Pro Asn Ser Pro Thr Val Tyr Asp Trp Leu  
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Tyr Ser Asp Asp Thr Arg Ser Lys His Arg  
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<211> 2538

<212> DNA

<213> Arabidopsis thaliana

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&lt;211&gt; 845

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 216

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 20 25 30

Lys Ser Lys Tyr Val Val Phe Trp Ala Leu Glu Lys Phe Ile Pro Glu  
 35 40 45

Gly Phe Thr Asp Phe Lys Leu Leu Tyr Val Arg Pro Pro Val Ser Tyr  
 50 55 60

Ile Pro Thr Pro Met Gly Ile Ala Val Ala Val Ser Glu Leu Arg Glu  
 65 70 75 80

Asp Val Val Ser Ala Tyr Lys Gln Glu Leu Asp Trp Ser Ala Asn Glu  
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Met Leu Arg Pro Tyr Lys Lys Met Phe Glu Arg Arg Lys Val Gln Val  
 100 105 110

Glu Val Leu Leu Leu Asp Ser Leu Glu Pro Ala Ala Ala Ile Ala Glu  
 115 120 125

Glu Ile Ala Gly Thr Gly Val Thr Lys Leu Val Ile Gly Met Ser Leu  
 130 135 140

Arg Gly Phe Phe Ser Arg Lys Ile Asp Met Ser Ser Leu Ile Ala Thr  
 145 150 155 160

Ala Val Pro Arg Phe Cys Thr Val Tyr Val Ile Ser Lys Gly Lys Leu  
 165 170 175

Ala Ser Val Arg Pro Ser Glu Ser Asp Ala Ser Gly Ser Ile Arg Phe  
 180 185 190

Glu Arg Ser Ser Ser Thr Ser Gly Ser Thr Asp Ser Pro Arg Leu Pro  
 195 200 205

Pro Glu Tyr Gln Asp Phe Leu Ser Ala Val Ser Glu Ala Gln Ser Arg  
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Val Ser Pro Phe Ser Pro Ala Leu Lys His Ser Met Gly Ser Asn Ala  
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Val Ala Gln Met Asp Thr Ser Ser Ser Gly Thr Asp Gln Glu Val  
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Ser Thr Gly Arg Gly Met Glu Ile Val His Ser Gly Ile Glu Gly Lys  
260 265 270

Lys Asn Lys Asp Glu Ser Phe Ser Ala Ser Phe Pro Met Gly Thr Glu  
275 280 285

Ala Tyr Asn Ser Met Ser Trp Thr Ser Lys Trp Arg Asp His Glu Asp  
290 295 300

Arg Arg Glu Met Arg Ser Ser Ser Ser Asn His Asp Leu Val  
305 310 315 320

Asn Met Asp Trp Gly Ala Val Val Pro Glu Asn Tyr Ser Trp Val Ser  
325 330 335

His Thr Ala Ser His Met Ser Asp Gly Leu Leu Ser Val His Ser Ile  
340 345 350

Thr Asp Asn Gln Val Asn Leu Asn Phe Glu Ile Glu Lys Leu Arg Ala  
355 360 365

Glu Leu Lys His Val Gln Glu Met Tyr Ala Met Ala Gln Thr Glu Thr  
370 375 380

Val Gly Ala Ser Lys Lys Leu Thr Glu Leu Asn Gln Arg Arg Phe Glu  
385 390 395 400

Glu Ser Glu Lys Leu Val Glu Leu Lys Glu Lys Glu Glu Val Ala Lys  
405 410 415

Asp Thr Ala Ser Lys Glu Lys Gln Arg Tyr Glu Glu Ala Met Lys Glu  
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Ala Glu Lys Val Lys Glu Leu Met Met Lys Glu Ala Leu His Arg Arg  
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Glu Ala Glu Phe Lys Ala Glu Arg Asp Ala Arg Glu Lys Asp Lys Leu  
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Gln Ala Ser Leu Val Ser Pro Gly Val Gln Tyr Gln His Tyr Thr Trp  
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Glu Glu Ile Ala Ala Thr Ser Asp Phe Ala Glu Asn Leu Lys Ile  
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Gly Ile Gly Ala Tyr Gly Ser Val Tyr Lys Cys Asn Leu His His Thr  
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Thr Gly Ala Val Lys Val Leu His Ala Gly Glu Thr Gln Leu Ser Lys  
515 520 525

Gln Phe Asp Gln Glu Leu Glu Ile Leu Ser Lys Ile Arg His Pro His  
530 535 540

Leu Val Leu Leu Leu Gly Ala Cys Pro Glu Arg Gly Cys Leu Val Tyr  
545 550 555 560

Glu Tyr Met Asp Asn Gly Ser Leu Asp Asp Arg Leu Met Leu Val Asn  
565 570 575

Asp Thr Pro Pro Ile Pro Trp Phe Glu Arg Phe Arg Ile Ala Leu Glu  
580 585 590

Val Ala Ser Ala Leu Val Phe Leu His Lys Ser Lys Pro Arg Pro Ile  
595 600 605

Ile His Arg Asp Leu Lys Pro Gly Asn Ile Leu Leu Asp His Asn Phe  
610 615 620

Val Ser Lys Leu Gly Asp Val Gly Leu Ser Thr Met Val Asn Gln Asp  
625 630 635 640

Asp Val Ser Ser Arg Thr Ile Phe Lys Gln Thr Ser Pro Val Gly Thr  
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Leu Cys Tyr Ile Asp Pro Glu Tyr Gln Arg Thr Gly Ile Ile Ser Pro  
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Lys Ser Asp Val Tyr Ser Leu Gly Val Val Ile Leu Gln Leu Ile Thr  
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Ala Lys Pro Ala Ile Ala Ile Thr His Met Val Glu Glu Ala Ile Gly  
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Asp Asp Ala Glu Phe Met Ala Ile Leu Asp Lys Lys Ala Gly Ser Trp  
705 710 715 720

Pro Ile Ser Asp Thr Arg Glu Leu Ala Ala Leu Gly Leu Cys Cys Thr  
725 730 735

Glu Met Arg Arg Arg Asp Arg Pro Asp Leu Lys Asp Gln Ile Ile Pro  
Page 347

Ala Leu Glu Arg Leu Arg Lys Val Ala Asp Lys Ala Gln Asn Leu Leu  
755 760

Ser Arg Thr Pro Ser Gly Pro Pro Ser His Phe Ile Cys Pro Leu Leu  
770 775 780

Lys Gly Val Met Asn Glu Pro Cys Val Ala Ala Asp Gly Tyr Thr Tyr  
785 790 795 800

Asp Arg Glu Ala Ile Glu Glu Trp Leu Arg Gln Lys Asp Thr Ser Pro  
805 810 815

Val Thr Asn Leu Pro Leu Pro Asn Lys Asn Leu Ile Ala Asn Tyr Thr  
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<212> DNA

<213> Arabidopsis thaliana

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<210> 218

<211> 296

<212> PRT

<213> Arabidopsis thaliana

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Glu His Ile Ser Asn Ser Ser Ser Glu Glu Glu Asn Glu Leu Lys  
35 40 45

Asp Leu Ser Thr Gln Thr Leu Asn Ser Pro Ser Thr Glu Ala Pro Thr  
50 55 60

Leu Asp Ser Gly Ser Glu Thr Asn Ser Asp Ser Asp Lys Pro Ile Val  
65 70 75 80

Leu Thr Ser Gln Lys Lys Lys Glu Gly Thr Asp Ser Ser Gly Thr Lys  
85 90 95

Arg Ala Ser Glu Gly Thr Ser Ser Lys Asp Ile Lys Arg Ala Lys Lys  
100 105 110

Val Ser Gly Asp Asp Asp Asn Lys Lys Phe Gln Ser Leu Trp Thr Lys  
115 120 125

Glu Asp Glu Ile Ser Leu Leu Gln Gly Met Ile Asp Phe Lys Ala Glu  
130 135 140

Thr Gly Thr Ser Ala His Asp Asp Met Asn Gly Phe Phe Asp Ile Ala  
145 150 155 160

Lys Arg Tyr Ile Ser Phe Asp Val Ser Lys Ile Gln Phe Gly Asp Lys  
165 170 175

Ile Arg Gly Leu Lys Lys Lys Tyr Phe Gly Val Arg Lys Lys Lys Gly  
Page 349

Page 350

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&lt;210&gt; 220

&lt;211&gt; 370

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 220

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Ile Asn Pro Thr Lys Val Asp Gly Leu Thr Trp Tyr Lys Asp Leu Gly
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Leu His Thr Phe Gly Glu Phe Ser Met Ala Met Ile Gln Ala Asn Ser
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Val Met Glu Asp Gln Cys Gln Ile Glu Ser Gly Pro Leu Thr Phe Asn
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Asn Pro Thr Val Gln Gly Thr Phe Val Gly Val Tyr Asp Gly His Gly
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Gly Pro Glu Ala Ser Arg Phe Ile Ala Asp Asn Ile Phe Pro Lys Leu
85 90 95

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Lys Lys Phe Ala Ser Glu Gly Arg Glu Ile Ser Glu Gln Val Ile Ser
100 105 110

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Lys Ala Phe Ala Glu Thr Asp Lys Asp Phe Leu Lys Thr Val Thr Lys
115 120 125

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Gln Trp Pro Thr Asn Pro Gln Met Ala Ser Val Gly Ser Cys Cys Leu
Page 351

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130

135

Ala Gly Val Ile Cys Asn Gly Leu Val Tyr Ile Ala Asn Thr Gly Asp  
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Ser Arg Ala Val Leu Gly Arg Ser Glu Arg Gly Gly Val Arg Ala Val  
165 170 175

Gln Leu Ser Val Glu His Asn Ala Asn Leu Glu Ser Ala Arg Gln Glu  
180 185 190

Leu Trp Ser Leu His Pro Asn Asp Pro Thr Ile Leu Val Met Lys His  
195 200 205

Arg Leu Trp Arg Val Lys Gly Val Ile Gln Val Thr Arg Ser Ile Gly  
210 215 220

Asp Ala Tyr Leu Lys Arg Ala Glu Phe Asn Arg Glu Pro Leu Leu Pro  
225 230 235 240

Lys Phe Arg Leu Pro Glu His Phe Thr Lys Pro Ile Leu Ser Ala Asp  
245 250 255

Pro Ser Val Thr Ile Thr Arg Leu Ser Pro Gln Asp Glu Phe Ile Ile  
260 265 270

Leu Ala Ser Asp Gly Leu Trp Glu His Leu Ser Asn Gln Glu Ala Val  
275 280 285

Asp Ile Val His Asn Ser Pro Arg Gln Gly Ile Ala Arg Arg Leu Leu  
290 295 300

Lys Ala Ala Leu Lys Glu Ala Ala Lys Lys Arg Glu Met Arg Tyr Ser  
305 310 315 320

Asp Leu Thr Glu Ile His Pro Gly Val Arg Arg His Phe His Asp Asp  
325 330 335

Ile Thr Val Ile Val Val Tyr Leu Asn Pro His Pro Val Lys Thr Asn  
340 345 350

Ser Trp Ala Ser Pro Leu Ser Ile Arg Gly Gly Tyr Pro Met His Ser  
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Thr Ser  
370

&lt;210&gt; 221

&lt;211&gt; 879

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 221

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&lt;210&gt; 222

&lt;211&gt; 292

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 222

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Met Ala Gly Leu Asp Leu Gly Thr Ala Phe Arg Tyr Val Asn His Gln
1           5           10           15

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Leu His Arg Pro Asp Leu His Leu His His Asn Ser Ser Ser Asp Asp
20           25           30

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```

Val Thr Pro Gly Ala Gly Met Gly His Phe Thr Val Asp Asp Glu Asp
Page 353

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Asn Asn Asn Asn His Gln Gly Leu Asp Leu Ala Ser Gly Gly Gly Ser  
50 55 60

Gly Ser Ser Gly Gly Gly Gly His Gly Gly Gly Asp Val Val  
65 70 75 80

Gly Arg Arg Pro Arg Gly Arg Pro Pro Gly Ser Lys Asn Lys Pro Lys  
85 90 95

Pro Pro Val Ile Ile Thr Arg Glu Ser Ala Asn Thr Leu Arg Ala His  
100 105 110

Ile Leu Glu Val Thr Asn Gly Cys Asp Val Phe Asp Cys Val Ala Thr  
115 120 125

Tyr Ala Arg Arg Arg Gln Arg Gly Ile Cys Val Leu Ser Gly Ser Gly  
130 135 140

Thr Val Thr Asn Val Ser Ile Arg Gln Pro Ser Ala Ala Gly Ala Val  
145 150 155 160

Val Thr Leu Gln Gly Thr Phe Glu Ile Leu Ser Leu Ser Gly Ser Phe  
165 170 175

Leu Pro Pro Pro Ala Pro Pro Gly Ala Thr Ser Leu Thr Ile Phe Leu  
180 185 190

Ala Gly Gly Gln Gly Gln Val Val Gly Gly Ser Val Val Gly Glu Leu  
195 200 205

Thr Ala Ala Gly Pro Val Ile Val Ile Ala Ala Ser Phe Thr Asn Val  
210 215 220

Ala Tyr Glu Arg Leu Pro Leu Glu Glu Asp Glu Gln Gln Gln Leu  
225 230 235 240

Gly Gly Gly Ser Asn Gly Gly Gly Asn Leu Phe Pro Glu Val Ala Ala  
245 250 255

Gly Gly Gly Gly Gly Leu Pro Phe Phe Asn Leu Pro Met Asn Met Gln  
260 265 270

Pro Asn Val Gln Leu Pro Val Glu Gly Trp Pro Gly Asn Ser Gly Gly  
275 280 285



Arg Gly Pro Phe  
290

<210> 223

<211> 1281

<212> DNA

<213> *Arabidopsis thaliana*

<400> 223

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gtcctcctcc agatggagcc ttaccaagt ggaaccttc ctctggttt tgatccaact      180
acttgccgta gtgtgtatgc tggaaacatt catcgcagg tcacagagat tcttcttcaa      240
gagatttttg caagtactgg tcctattgaa agctgtaaac tcatcagaaa ggataagtca      300
tcatatggat ttgttacta ctttgatcga agatgtgcta gtatggctat aatgactctt      360
aacggaagcg atatatttgg acagcctatg aaagttaatt gggcgtatgc aactggtcaa      420
aggggaagata catcaagtca tttcaacatt tttgttgag atcttagtcc agaggttact      480
gatgcagcat tgtttgatag cttttctgct tttaacagct gctcggagcg aagagtaatg      540
tgaggaccaga aaactggacg ctcaagaggc tttggtttt ttctcttcg taatcagcag      600
gatgctcaaa ctgccataaa tgagatgaat ggtaaatggg taagtagcag acagatcaga      660
tgcaactggg cgacaaaagg tgctactttt ggcgaggaca aacatagctc tgatggaaaa      720
agtgttgtag aacttactaa cggatcttca gaggatggta gagagctgtc aaatgaagat      780
gcccctgaaa acaatcctca atttacaact gtctatgtag gaaatctctc tccagaagta      840
actcagcttg atctacaccg tctattctat acccttggtg ctggagtgat cgaagaggct      900
cgtgtccagc gagacaaaag gtttggtttt gtgagatata acactcatga cgaggctgct      960
cttgctattc agatgggcaa cgctcagcct ttctcttcta gcagacagat aagggtgtcc      1020
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gcatcagtc cttctctgtc tgcaatggac ctcttagcct acgagaggca actggtctta      1140
gccaaagatgc atcctcaggc tcaacattct ctgaggcaag caggctcttg agtcaatgtt      1200
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cagctcatgt actatcagta a                                     1281

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<210> 224

<211> 426

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 224

Met Gln Asn Gln Arg Leu Ile Lys Gln Gln Gln Gln Gln Gln Gln  
 1 5 10 15

Gln His Gln Gln Ala Met Ile Gln Gln Ala Met Met Gln Gln His Pro  
 20 25 30

Ser Leu Tyr His Pro Gly Val Met Ala Pro Pro Gln Met Glu Pro Leu  
 35 40 45

Pro Ser Gly Asn Leu Pro Pro Gly Phe Asp Pro Thr Thr Cys Arg Ser  
 50 55 60

Val Tyr Ala Gly Asn Ile His Thr Gln Val Thr Glu Ile Leu Leu Gln  
 65 70 75 80

Glu Ile Phe Ala Ser Thr Gly Pro Ile Glu Ser Cys Lys Leu Ile Arg  
 85 90 95

Lys Asp Lys Ser Ser Tyr Gly Phe Val His Tyr Phe Asp Arg Arg Cys  
 100 105 110

Ala Ser Met Ala Ile Met Thr Leu Asn Gly Arg His Ile Phe Gly Gln  
 115 120 125

Pro Met Lys Val Asn Trp Ala Tyr Ala Thr Gly Gln Arg Glu Asp Thr  
 130 135 140

Ser Ser His Phe Asn Ile Phe Val Gly Asp Leu Ser Pro Glu Val Thr  
 145 150 155 160

Asp Ala Ala Leu Phe Asp Ser Phe Ser Ala Phe Asn Ser Cys Ser Asp  
 165 170 175

Ala Arg Val Met Trp Asp Gln Lys Thr Gly Arg Ser Arg Gly Phe Gly  
 180 185 190

Phe Val Ser Phe Arg Asn Gln Gln Asp Ala Gln Thr Ala Ile Asn Glu  
 195 200 205

Met Asn Gly Lys Trp Val Ser Ser Arg Gln Ile Arg Cys Asn Trp Ala  
 210 215 220

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Thr Lys Gly Ala Thr Phe Gly Glu Asp Lys His Ser Ser Asp Gly Lys  
 225 230 235 240

Ser Val Val Glu Leu Thr Asn Gly Ser Ser Glu Asp Gly Arg Glu Leu  
 245 250 255

Ser Asn Glu Asp Ala Pro Glu Asn Asn Pro Gln Phe Thr Thr Val Tyr  
 260 265 270

Val Gly Asn Leu Ser Pro Glu Val Thr Gln Leu Asp Leu His Arg Leu  
 275 280 285

Phe Tyr Thr Leu Gly Ala Gly Val Ile Glu Glu Val Arg Val Gln Arg  
 290 295 300

Asp Lys Gly Phe Gly Phe Val Arg Tyr Asn Thr His Asp Glu Ala Ala  
 305 310 315 320

Leu Ala Ile Gln Met Gly Asn Ala Gln Pro Phe Leu Phe Ser Arg Gln  
 325 330 335

Ile Arg Cys Ser Trp Gly Asn Lys Pro Thr Pro Ser Gly Thr Ala Ser  
 340 345 350

Asn Pro Leu Pro Pro Pro Ala Pro Ala Ser Val Pro Ser Leu Ser Ala  
 355 360 365

Met Asp Leu Leu Ala Tyr Glu Arg Gln Leu Ala Leu Ala Lys Met His  
 370 375 380

Pro Gln Ala Gln His Ser Leu Arg Gln Ala Gly Leu Gly Val Asn Val  
 385 390 395 400

Ala Gly Gly Thr Ala Ala Met Tyr Asp Gly Tyr Gln Asn Val Ala  
 405 410 415

Ala Ala His Gln Gln Leu Met Tyr Tyr Gln  
 420 425

<210> 225

<211> 999

<212> DNA

<213> Arabidopsis thaliana

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<400> 225
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gaccagaatc ttattgttca cagagatgga aaatctgtcc ggtaacgct tgatgaaaga 180
accggttctg gatttgtctc aaatgatatt tacttgcatt gcttcttcag ttctcttctc 240
aaattgccag cagattactc tgcaggagtt gttatcgctt tttatttctc aaatggggac 300
ttatatgaga agaatcatga cgagattgat tttgagtttt tggggaatat tagaggcaga 360
gaatggagga ttcagaccaa tatatacggg aatggaagca cacacttggg cagagaagaa 420
agatacaatc tttggtttga tccaacagag gatttccatc aatacagtat cctttggtct 480
ctatctcaca tcatttttta ttagacaat gttccgatca gagaagtcaa acgtacggcg 540
tcgatgggag gtagcttccc ggcaagcca atgtctttat attcaaccat atgggaggtt 600
tccaaatggg cgactgatgg aggcaagtac ggtgtaaatt acaaataatgc cctttacgtc 660
tctcaattca ctgatctgat cctccacggc tgcgccgttg accccaccga gaagtttccg 720
agctgcaaag atgaagcggg tcagaatctc cggctagcat cggagataac ggagctctag 780
aggacaaga tggagatttt ccgacagaaa cacatgactt attcgtattg ttacgatcat 840
atgaggtaca aggtggtttt gtcggagtgt gttgtgaatc cggctgaggc taagcgtctc 900
aggggtctat atccggtcac gttcgggtggg attcctcacg gccaccgtcg tgggaagcat 960
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<210> 226

<211> 332

<212> PRT

<213> *Arabidopsis thaliana*

<400> 226

Met Gly Phe Ile Thr Arg Phe Leu Val Phe Met Ser Leu Phe Thr Ser  
1 5 10 15

Leu Val Ser Gly Phe Ala Leu Gln Lys Leu Pro Leu Ile Gln Phe Asp  
20 25 30

Glu Gly Tyr Thr Gln Leu Phe Gly Asp Gln Asn Leu Ile Val His Arg  
35 40 45

Asp Gly Lys Ser Val Arg Leu Thr Leu Asp Glu Arg Thr Gly Ser Gly  
50 55 60

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Phe Val Ser Asn Asp Ile Tyr Leu His Gly Phe Phe Ser Ser Ser Ile  
 65 70 75 80  
 Lys Leu Pro Ala Asp Tyr Ser Ala Gly Val Val Ile Ala Phe Tyr Leu  
 85 90 95  
 Ser Asn Gly Asp Leu Tyr Glu Lys Asn His Asp Glu Ile Asp Phe Glu  
 100 105 110  
 Phe Leu Gly Asn Ile Arg Gly Arg Glu Trp Arg Ile Gln Thr Asn Ile  
 115 120 125  
 Tyr Gly Asn Gly Ser Thr His Leu Gly Arg Glu Glu Arg Tyr Asn Leu  
 130 135 140  
 Trp Phe Asp Pro Thr Glu Asp Phe His Gln Tyr Ser Ile Leu Trp Ser  
 145 150 155 160  
 Leu Ser His Ile Ile Phe Tyr Val Asp Asn Val Pro Ile Arg Glu Val  
 165 170 175  
 Lys Arg Thr Ala Ser Met Gly Gly Asp Phe Pro Ala Lys Pro Met Ser  
 180 185 190  
 Leu Tyr Ser Thr Ile Trp Asp Gly Ser Lys Trp Ala Thr Asp Gly Gly  
 195 200 205  
 Lys Tyr Gly Val Asn Tyr Lys Tyr Ala Pro Tyr Val Ser Gln Phe Thr  
 210 215 220  
 Asp Leu Ile Leu His Gly Cys Ala Val Asp Pro Thr Glu Lys Phe Pro  
 225 230 235 240  
 Ser Cys Lys Asp Glu Ala Val Gln Asn Leu Arg Leu Ala Ser Glu Ile  
 245 250 255  
 Thr Glu Ser Gln Arg Asn Lys Met Glu Ile Phe Arg Gln Lys His Met  
 260 265 270  
 Thr Tyr Ser Tyr Cys Tyr Asp His Met Arg Tyr Lys Val Val Leu Ser  
 275 280 285  
 Glu Cys Val Val Asn Pro Ala Glu Ala Lys Arg Leu Arg Val Tyr Asp  
 290 295 300  
 Pro Val Thr Phe Gly Gly Ile Pro His Gly His Arg Arg Gly Lys His  
 305 310 315 320 325 330 335 340 345 350

305

310

315

320

Arg Ser Arg Ser Arg Leu Ala Arg Thr Glu Ser Ile  
 325 330

&lt;210&gt; 227

&lt;211&gt; 1065

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 227

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ttccactcgc acgaagcttt agcttgcttc atccttcgtc gttccaatag attctccgat	180
gctcaaatcg tccgaaccag agatcatcag gttttggaga agcttgatgc ggcacttgat	240
gttgagggtg tgtatgatcc tcagagtga cgttatgacc atcaccagaa aggatttagt	300
gaagtgtttg gccttgggtt taatactaaa ctcagtagtg ctgggcttgt ctataagcat	360
tatggattgg aaataatttc caaggagctt caacttgagc agagacatcc tgatgtgttt	420
cgattgtttc tagctgtgta caaaaacttc attgaggcag tagatgcttt agacaatggt	480
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aggattggaa gattgaactt agactggatt gaacctgac agtctagtgc caaagaagat	600
gaagcctttc atcgggcaat ggagcttgct ggcctctgagt tcttggagtg tgttcatatt	660
cacgcgaaat cgtgggtacc agctcggta attgttatgg agtgccttgc aaaacggtat	720
gatatagact ccagtggaag aattatgaag ctcaagtaac aatgcccatg gaaactccat	780
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gatgatagaa gcgaaaactg gagaatacaa gcagtttcgg ttaccacaga gaggtttgag	900
agccgtaaag ctttaccatt agcatggaga ggtttagaaa aggagaagct ctacagaggaa	960
agctcaattc cacgctgtgt tttttgcat atgagtggtt tcattgggtc aaaccaaacc	1020
tatgaaggtg ccttagcaat ggcaagagct tctttgatgg cttag	1065

&lt;210&gt; 228

&lt;211&gt; 354

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 228

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Met Phe Gly Ser Arg Gly Leu Cys Cys Ser Arg Ile Trp Asn Arg Ser
 1      5      10
Leu Phe Leu Lys Arg Ser Ser Asn Phe Arg Ala Ser Phe Ser Thr Lys
      20      25      30
Arg Val Gly Thr His Asn Gly Thr Phe His Cys Asp Glu Ala Leu Ala
      35      40      45
Cys Phe Ile Leu Arg Arg Ser Asn Arg Phe Ser Asp Ala Gln Ile Val
      50      55      60
Arg Thr Arg Asp His Gln Val Leu Glu Lys Leu Asp Ala Ala Leu Asp
65      70      75      80
Val Gly Gly Val Tyr Asp Pro Gln Ser Glu Arg Tyr Asp His His Gln
      85      90      95
Lys Gly Phe Ser Glu Val Phe Gly Leu Gly Phe Asn Thr Lys Leu Ser
      100      105      110
Ser Ala Gly Leu Val Tyr Lys His Tyr Gly Leu Glu Ile Ile Ser Lys
      115      120      125
Glu Leu Gln Leu Glu Gln Arg His Pro Asp Val Phe Arg Leu Phe Leu
      130      135      140
Ala Val Tyr Lys Asn Phe Ile Glu Ala Val Asp Ala Leu Asp Asn Gly
145      150      155      160
Ile His Gln Tyr Asp Thr Asp Gln Pro Pro Arg Tyr Val Asn Asn Thr
      165      170      175
Ser Leu Gly His Arg Ile Gly Arg Leu Asn Leu Asp Trp Ile Glu Pro
      180      185      190
Asp Gln Ser Ser Ala Lys Glu Asp Glu Ala Phe His Arg Ala Met Glu
      195      200      205
Leu Ala Gly Ser Glu Phe Leu Glu Cys Val His Phe His Ala Lys Ser
      210      215      220
Trp Leu Pro Ala Arg Ser Ile Val Met Glu Cys Leu Ala Lys Arg Tyr
225      230      235      240

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Asp Ile Asp Ser Ser Gly Glu Ile Met Lys Leu Ser Lys Gln Cys Pro  
 245 250 255  
 Trp Lys Leu His Ile Phe Glu Leu Glu Glu Glu Met Lys Ile Asp Pro  
 260 265 270  
 Pro Ile Lys Tyr Val Leu Tyr Gln Asp Asp Arg Ser Glu Asn Trp Arg  
 275 280 285  
 Ile Gln Ala Val Ser Val Ser Pro Glu Arg Phe Glu Ser Arg Lys Ala  
 290 295 300  
 Leu Pro Leu Ala Trp Arg Gly Leu Glu Lys Glu Lys Leu Ser Glu Glu  
 305 310 315 320  
 Ser Ser Ile Pro Arg Cys Val Phe Val His Met Ser Gly Phe Ile Gly  
 325 330 335  
 Ala Asn Gln Thr Tyr Glu Gly Ala Leu Ala Met Ala Arg Ala Ser Leu  
 340 345 350

Met Ala

<210> 229

<211> 1350

<212> DNA

<213> Arabidopsis thaliana

<400> 229  
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 ccaccgactc aggtggctaa ctttatcaag acacaaactt cgattgatag cgtcaagatc 180  
 ttcatgtgtg atccccatat cctacgtgcc ttgcgtggaa ctggtatctc cgtcgttggc 240  
 accgttccta acggtgatat tccggcgttg gctaacggaa gacaagctcg tcggtggggt 300  
 tcggttaaca ttttgccgtt tcatcctcag acgaagatta agtatatctc agtcggaaat 360  
 gagattctgc tcaccggaga taataacatg atcaataatc tcttaccggc gatgaggaat 420  
 cttaacaacg ctttggttcg tgctgggtgc agagatgta aggttacaac cgcacactca 480  
 cttaacatca tagcctatga cctgaccggg gcaccaagca gcggtagatt caggccgggt 540  
 tgggacaaag gcatattggc tccaatccta gcttaccatc gccgaaccaa gtcacctttc 600



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atgggtaacc cgtaccctta ctttggtttt gaccccaaaa acgtcaactt cgcaattttc	660
cgaacaccgt acaaggcagt ccgtgaccg ttcacccgcc acgtctacac caacatgttt	720
gatgactca tggactcgac atactcagcc atgaaagctc ttggatacgg tgatgttaac	780
attgtcgttg gcgagactgg ctggccatct gcttgtgacg caccttgggtg ctcgcctgcg	840
aatgctgctt ggttcaacct caacattatc aaacgtgcac aaggccaagg gacacctctc	900
atgcctaaca gacggttcga gacatacatt ttcggtctct tcaacgaaga aggcaaaccc	960
ggtccgaccg cagagcgtaa ctggggactt ttccgagcag atttctcccc ggtttacgat	1020
gttggtcttc tccgaaacgg acaaggcggg ggaggccgcc cagcattgcc cgcacctagt	1080
actgccggcg gtaaatggtg ttagcgagg tccggggcga cgaatactca gctgcaagac	1140
agtattaatt ggggtgtgtg tcagggtgtt gactgtaaac cgatccaagc tgggtggttcg	1200
tgctttaacc cgagcagttt gaggacgcac gcattctttt ttatgaatgc ttatttcag	1260
agccacggcc gactgatgg tgcttgtaac ttcagtgga ctggtatgat cgtagggaac	1320
aaccaagca atggtgcatg taagtactaa	1350

<210> 230

<211> 449

<212> PRT

<213> Arabidopsis thaliana

<400> 230

Met	Ala	Lys	Ala	Pro	Pro	Ser	Ile	Ser	Leu	Leu	Leu	Leu	Cys	Ala
1				5					10				15	

Ala	Val	Phe	Leu	Thr	Ile	Pro	Ala	Val	Ile	Ser	Ala	Ile	Gly	Val	Asn
			20					25					30		

Tyr	Gly	Thr	Leu	Gly	Asn	Leu	Pro	Pro	Thr	Gln	Val	Ala	Asn	Phe
		35					40				45			

Ile	Lys	Thr	Gln	Thr	Ser	Ile	Asp	Ser	Val	Lys	Ile	Phe	Asp	Val	Asn
	50					55					60				

Pro	Asp	Ile	Leu	Arg	Ala	Phe	Ala	Gly	Thr	Gly	Ile	Ser	Val	Val	Val
65					70					75				80	

Thr	Val	Pro	Asn	Gly	Asp	Ile	Pro	Ala	Leu	Ala	Asn	Gly	Arg	Gln	Ala
				85					90					95	

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Arg Arg Trp Val Ser Val Asn Ile Leu Pro Phe His Pro Gln Thr Lys  
100 105 110

Ile Lys Tyr Ile Ser Val Gly Asn Glu Ile Leu Leu Thr Gly Asp Asn  
115 120

Asn Met Ile Asn Asn Leu Leu Pro Ala Met Arg Asn Leu Asn Asn Ala  
130 135 140

Leu Val Arg Ala Gly Val Arg Asp Val Lys Val Thr Thr Ala His Ser  
145 150 155 160

Leu Asn Ile Ile Ala Tyr Asp Leu Thr Gly Ala Pro Ser Ser Gly Arg  
165 170 175

Phe Arg Pro Gly Trp Asp Lys Gly Ile Leu Ala Pro Ile Leu Ala Tyr  
180 185 190

His Arg Arg Thr Lys Ser Pro Phe Met Val Asn Pro Tyr Pro Tyr Phe  
195 200 205

Gly Phe Asp Pro Lys Asn Val Asn Phe Ala Ile Phe Arg Thr Pro Tyr  
210 215 220

Lys Ala Val Arg Asp Pro Phe Thr Arg His Val Tyr Thr Asn Met Phe  
225 230 235 240

Asp Ala Leu Met Asp Ser Thr Tyr Ser Ala Met Lys Ala Leu Gly Tyr  
245 250 255

Gly Asp Val Asn Ile Val Val Gly Glu Thr Gly Trp Pro Ser Ala Cys  
260 265 270

Asp Ala Pro Trp Cys Ser Pro Ala Asn Ala Ala Trp Phe Asn Leu Asn  
275 280 285

Ile Ile Lys Arg Ala Gln Gly Gln Gly Thr Pro Leu Met Pro Asn Arg  
290 295 300

Arg Phe Glu Thr Tyr Ile Phe Gly Leu Phe Asn Glu Glu Gly Lys Pro  
305 310 315 320

Gly Pro Thr Ala Glu Arg Asn Trp Gly Leu Phe Arg Ala Asp Phe Ser  
325 330 335

Pro Val Tyr Asp Val Gly Leu Leu Arg Asn Gly Gln Gly Gly Gly  
340 345 350

047-E2F-PCT.ST25.txt

Arg Pro Ala Leu Pro Ala Pro Ser Thr Ala Gly Gly Lys Trp Cys Val  
 355 360 365  
 Ala Arg Ser Gly Ala Thr Asn Thr Gln Leu Gln Asp Ser Ile Asn Trp  
 370 375 380  
 Val Cys Gly Gln Gly Val Asp Cys Lys Pro Ile Gln Ala Gly Gly Ser  
 385 390 395 400  
 Cys Phe Asn Pro Ser Ser Leu Arg Thr His Ala Ser Phe Val Met Asn  
 405 410 415  
 Ala Tyr Phe Gln Ser His Gly Arg Thr Asp Gly Ala Cys Asn Phe Ser  
 420 425 430  
 Gly Thr Gly Met Ile Val Gly Asn Asn Pro Ser Asn Gly Ala Cys Lys  
 435 440 445

Tyr

<210> 231

<211> 219

<212> DNA

<213> Arabidopsis thaliana

<400> 231  
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 actccgagga gaggccgaat caagaaaatg atcgcggtg atctagtcgg atcagggaaa 180  
 cagaacaact acgacggaga cggtaaagaga ggaggctag 219

<210> 232

<211> 72

<212> PRT

<213> Arabidopsis thaliana

<400> 232

Met Glu Leu Pro Ser Pro Tyr Ser Ser Arg Lys Glu Glu Ser Thr Val  
 Page 365

1 5 10 15  
 Pro Pro Lys Arg Gly Arg Val Lys Ile Met Ile Phe Arg Asp Leu Val  
 20 25 30  
 Arg Ser Glu Thr Ser Met Ala Pro Thr Pro Arg Arg Gly Arg Ile Lys  
 35 40 45  
 Lys Met Ile Ala Gly Asp Leu Val Gly Ser Gly Lys Gln Asn Asn Tyr  
 50 55 60  
 Asp Gly Asp Gly Lys Arg Gly Gly  
 65 70

<210> 233

<211> 564

<212> DNA

<213> Arabidopsis thaliana

<400> 233  
 atgtcttcgc caagcaaacg cagagaaatg gatatgatga agctgatgat gagcgattat 60  
 aaagtggaaa cgatcaacga tggcatgcaa gaattctatg ttgaattcaa tgggtccaaa 120  
 gagactctct atcaaggagg tgtgtggaag ataagagttg agcttcacaga tgcttatcct 180  
 tataaatctc catctgttgg ttctattact aaaatttacc atcctaattg tgatgaactg 240  
 tcgggttctg ttgttttaga tgtgattaac caaacttgga gtcctatgtt cgaccttggtg 300  
 aatgtgtttg agacatttct tcctcagctt cttctgtatc caaacccatc agatccattg 360  
 aatggagaag ctgctgcgtt aatgatgcgt gatcgtcctg cttatgagca acgagttaaa 420  
 gaatactgtg agaagtatgc aaagccaggg gaaggttcag aagataagtc tagcgatgaa 480  
 gaactaagtg aagaggaata cggtcagat aatgaggatg atgatgatga tgatgttgca 540  
 attgctggca aaccagatcc ttga 564

<210> 234

<211> 187

<212> PRT

<213> Arabidopsis thaliana

<400> 234

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Met Ser Ser Pro Ser Lys Arg Arg Glu Met Asp Met Met Lys Leu Met  
1 5 10 15

Met Ser Asp Tyr Lys Val Glu Thr Ile Asn Asp Gly Met Gln Glu Phe  
20 25 30

Tyr Val Glu Phe Asn Gly Pro Lys Asp Ser Leu Tyr Gln Gly Gly Val  
35 40 45

Trp Lys Ile Arg Val Glu Leu Pro Asp Ala Tyr Pro Tyr Lys Ser Pro  
50 55 60

Ser Val Gly Phe Ile Thr Lys Ile Tyr His Pro Asn Val Asp Glu Leu  
65 70 75 80

Ser Gly Ser Val Cys Leu Asp Val Ile Asn Gln Thr Trp Ser Pro Met  
85 90 95

Phe Asp Leu Val Asn Val Phe Glu Thr Phe Leu Pro Gln Leu Leu Leu  
100 105 110

Tyr Pro Asn Pro Ser Asp Pro Leu Asn Gly Glu Ala Ala Ala Leu Met  
115 120 125

Met Arg Asp Arg Pro Ala Tyr Glu Gln Arg Val Lys Glu Tyr Cys Glu  
130 135 140

Lys Tyr Ala Lys Pro Gly Glu Gly Ser Glu Asp Lys Ser Ser Asp Glu  
145 150 155 160

Glu Leu Ser Glu Glu Glu Tyr Gly Ser Asp Asn Glu Asp Asp Asp Asp  
165 170 175

Asp Asp Val Ala Ile Ala Gly Lys Pro Asp Pro  
180 185

<210> 235

<211> 1584

<212> DNA

<213> Arabidopsis thaliana

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acaagtccta	actccgccgt	tgcttacatc	ccaacaaact	cttcttttcac	cactgtcctc	180
cgcagccgta	tacctaacct	ccgtttcgac	aaaccacta	ctccaaaacc	catctccgtg	240
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 Page 377

1025

1030

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Thr	Arg	Pro	Gly	Ala	Asp	Trp	His	Asp	Leu	Pro	Lys	Arg	Lys	Val
	1400					1405					1410			
Thr	Leu	Ser	Asp	Gly	Arg	Val	Glu	Glu	Met	Ile	Pro	Phe	Cys	Leu
	1415					1420					1425			
Pro	Asn	Thr	Ala	Glu	Arg	His	Asn	Gly	Trp	Lys	Gly	Leu	Tyr	Gly
	1430					1435					1440			
Arg	Leu	Asp	Trp	Gln	Gly	Asn	Phe	Pro	Thr	Ser	Val	Thr	Asp	Pro
	1445					1450					1455			
Gln	Pro	Met	Gly	Lys	Val	Gly	Met	Cys	Phe	His	Pro	Glu	Gln	His
	1460					1465					1470			
Arg	Ile	Leu	Thr	Val	Arg	Glu	Cys	Ala	Arg	Ser	Gln	Gly	Phe	Pro
	1475					1480					1485			
Asp	Ser	Tyr	Glu	Phe	Ala	Gly	Asn	Ile	Asn	His	Lys	His	Arg	Gln
	1490					1495					1500			

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Ile Gly Asn Ala Val Pro Pro Leu Ala Phe Ala Leu Gly Arg  
1505 1510 1515

Lys Leu Lys Glu Ala Leu His Leu Lys Lys Ser Pro Gln His Gln  
1520 1525 1530

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<210> 239

<211> 762

<212> DNA

<213> Arabidopsis thaliana

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tcggataatc cggcggtgat tctccctccg ttgcggtggg gaatccgtca acgacggtct      180
cgttcctcaa gatttggtgg cggcggcggc gttctcgttt cttgaagaa agatgtcgat      240
tccgttagag ccagtccgaa gactcctctc tcgtggagcg gcgcatctgg aagtgggtggc      300
ggctctgctt ctccctccgc cgatggattc gaggataaca gtcgccaagc tagctgctct      360
acatctacag gatctggatc taagggtttt cccacaaacg aaatcaccag ttgtttcttc      420
aagagattga agaagaggaa gtcatctttt gagcttaaaa atgaagagaa cttgaagttg      480
aaggagagac ttgaccttga aaaggagatt gcaagttctc gagcaacatt cgatgaacaa      540
aaccttagga accaaaagct gaagaggatt aagcttgact taaactcagg ccgtgtcaca      600
aacaagaaac ctgttgattt gattcgtaaa tcacaactcg agcggctaca gggatcaaaa      660
tcttgcaaaa ccagtgactc gcaaaatcag gggagtgtct tcgtcctccc tgatctcaac      720
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<210> 240

<211> 253

<212> PRT

<213> Arabidopsis thaliana

<400> 240

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 20 25 30  
 Leu Lys His Ala Gly Thr Val Val Ser Asp Asn Pro Ala Val Ile Leu  
 35 40 45  
 Pro Pro Leu Arg Trp Gly Ile Arg Gln Arg Arg Ser Arg Ser Ser Arg  
 50 55 60  
 Phe Gly Gly Gly Gly Gly Val Leu Val Ser Leu Lys Lys Asp Val Asp  
 65 70 75 80  
 Ser Val Arg Ala Ser Pro Lys Thr Pro Leu Ser Trp Ser Gly Gly Ser  
 85 90 95  
 Gly Ser Gly Gly Gly Ser Ala Ser Pro Ser Ala Asp Gly Phe Glu Asp  
 100 105 110  
 Asn Ser Arg Gln Ala Ser Cys Ser Thr Ser Thr Gly Ser Gly Ser Lys  
 115 120 125  
 Val Phe Pro Thr Asn Glu Ile Thr Ser Cys Phe Ser Lys Arg Leu Lys  
 130 135 140  
 Lys Arg Lys Ser Ser Phe Glu Leu Lys Asn Glu Glu Asn Leu Lys Leu  
 145 150 155 160  
 Lys Glu Arg Leu Asp Leu Glu Lys Glu Ile Ala Ser Leu Arg Ala Thr  
 165 170 175  
 Phe Asp Glu Gln Asn Leu Arg Asn Gln Lys Leu Lys Arg Ile Lys Leu  
 180 185 190  
 Asp Leu Asn Ser Gly Arg Val Thr Asn Lys Lys Pro Val Asp Leu Ile  
 195 200 205  
 Arg Lys Ser Gln Leu Glu Arg Leu Gln Gly Ser Lys Ser Cys Lys Thr  
 210 215 220  
 Ser Asp Ser Gln Asn Gln Gly Ser Phe Phe Val Leu Pro Asp Leu Asn  
 225 230 235 240  
 Met Ala Pro Ser Glu Glu Glu Ile Leu Tyr Gly Thr Ser  
 245 250

&lt;210&gt; 241

&lt;211&gt; 870

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 241

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caacgctgtc ttcttcaaaa accctcttct ccttcttcgt taccaccgac ttctgcttct      240
cctaattccac cgtaaacgag gaagatgaag aagaagcagc agcagatgaa cgattgtggt      300
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caaaatttct tcgaccttga agaagaacac actcaaagct tcaacaggac cacaagggaa      600
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cgtcgccgac caactacacc tgaaatggac gagtttttct cgggtgctga agaagaacaa      780
cagaagcaat tcattgagaa gtacaacttt gatcctgtga acgaacaacc actaccagga      840
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&lt;210&gt; 242

&lt;211&gt; 289

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 242

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Met Gly Lys Tyr Ile Arg Lys Ser Lys Ile Asp Gly Ala Gly Ala Gly
1           5           10          15
Ala Gly Gly Gly Gly Gly Gly Gly Gly Gly Glu Ser Ser Ile Ala
          20          25          30

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Leu Met Asp Val Val Ser Pro Ser Ser Ser Ser Ser Leu Gly Val Leu  
 35 40 45  
 Thr Arg Ala Lys Ser Leu Ala Leu Gln Gln Gln Gln Arg Cys Leu  
 50 55 60  
 Leu Gln Lys Pro Ser Ser Pro Ser Ser Leu Pro Pro Thr Ser Ala Ser  
 65 70 75 80  
 Pro Asn Pro Pro Ser Lys Gln Lys Met Lys Lys Lys Gln Gln Gln Met  
 85 90 95  
 Asn Asp Cys Gly Ser Tyr Leu Gln Leu Arg Ser Arg Arg Leu Gln Lys  
 100 105 110  
 Lys Pro Pro Ile Val Val Ile Arg Ser Thr Lys Arg Arg Lys Gln Gln  
 115 120 125  
 Arg Arg Asn Glu Thr Cys Gly Arg Asn Pro Asn Pro Arg Ser Asn Leu  
 130 135 140  
 Asp Ser Ile Arg Gly Asp Gly Ser Arg Ser Asp Ser Val Ser Glu Ser  
 145 150 155 160  
 Val Val Phe Gly Lys Asp Lys Asp Leu Ile Ser Glu Ile Asn Lys Asp  
 165 170 175  
 Pro Thr Phe Gly Gln Asn Phe Phe Asp Leu Glu Glu Glu His Thr Gln  
 180 185 190  
 Ser Phe Asn Arg Thr Thr Arg Glu Ser Thr Pro Cys Ser Leu Ile Arg  
 195 200 205  
 Arg Pro Glu Ile Met Thr Thr Pro Gly Ser Ser Thr Lys Leu Asn Ile  
 210 215 220  
 Cys Val Ser Glu Ser Asn Gln Arg Glu Asp Ser Leu Ser Arg Ser His  
 225 230 235 240  
 Arg Arg Arg Pro Thr Thr Pro Glu Met Asp Glu Phe Phe Ser Gly Ala  
 245 250 255  
 Glu Glu Glu Gln Gln Lys Gln Phe Ile Glu Lys Tyr Asn Phe Asp Pro  
 260 265 270  
 Val Asn Glu Gln Pro Leu Pro Gly Arg Phe Glu Trp Thr Lys Val Asp  
 275 280 285

Asp

&lt;210&gt; 243

&lt;211&gt; 1410

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 243

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actcgcgggt gtggagctgt tgctgatcag gttgtctctg acgcgattgt gatcaaatct	180
actctgaagc gtaagacaga ttgggtaaac caaatagttg aggtcaatga attgaatacc	240
ggtgttcttc aaacacctgt atcagggaaa ggggggaaag ccaagaaaac ttctaggtct	300
gcgaagtcta ataagctcgg aacgctagct tctggctcta atgcaggttc tcctggaaat	360
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tttatcaatt tgataaaaca agcagaggat ggtattcttg atctaataca agcagctgat	480
actttagagg taaaaagag aaggatatat gatataacca atgtgttaga aggaataggt	540
ttgatagaga agacgcttaa gaacaggatt cagtgggaagg gtctcgatgt ctcaaaacca	600
ggagaacaaa tcgaaagcat agctaaccta caggatgaag taaaaaacct cgcagctgag	660
gaggcaagat tagatgacca aatcagagaa tcacaagaaa gattaacaag cttgagttag	720
gatgaaaaca acaaaagggt actgttcgtc actgaaaacg acattaagaa cctaccatgc	780
ttccagaata agacgctgat agctgtaag gcaccgcatg gaacaactct tgaggttcca	840
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&lt;210&gt; 244

&lt;211&gt; 469

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 244

Met Ser Glu Glu Val Pro Gln Gln Phe Pro Ser Ser Lys Arg Gln Leu  
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20 25 30Tyr His Arg Phe Asp Ala Ala Glu Thr Arg Gly Gly Gly Ala Val Ala  
35 40 45Asp Gln Val Val Ser Asp Ala Ile Val Ile Lys Ser Thr Leu Lys Arg  
50 55 60Lys Thr Asp Leu Val Asn Gln Ile Val Glu Val Asn Glu Leu Asn Thr  
65 70 75 80Gly Val Leu Gln Thr Pro Val Ser Gly Lys Gly Gly Lys Ala Lys Lys  
85 90 95Thr Ser Arg Ser Ala Lys Ser Asn Lys Ser Gly Thr Leu Ala Ser Gly  
100 105 110Ser Asn Ala Gly Ser Pro Gly Asn Asn Phe Ala Gln Ala Gly Thr Cys  
115 120 125Arg Tyr Asp Ser Ser Leu Gly Leu Leu Thr Lys Lys Phe Ile Asn Leu  
130 135 140Ile Lys Gln Ala Glu Asp Gly Ile Leu Asp Leu Asn Lys Ala Ala Asp  
145 150 155 160Thr Leu Glu Val Gln Lys Arg Arg Ile Tyr Asp Ile Thr Asn Val Leu  
165 170 175Glu Gly Ile Gly Leu Ile Glu Lys Thr Leu Lys Asn Arg Ile Gln Trp  
180 185 190Lys Gly Leu Asp Val Ser Lys Pro Gly Glu Thr Ile Glu Ser Ile Ala  
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195 047-E2F-PCT.ST25.txt  
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 Asn Leu Gln Asp Glu Val Gln Asn Leu Ala Ala Glu Glu Ala Arg Leu  
 210 215 220  
 Asp Asp Gln Ile Arg Glu Ser Gln Glu Arg Leu Thr Ser Leu Ser Glu  
 225 230 235 240  
 Asp Glu Asn Asn Lys Arg Leu Leu Phe Val Thr Glu Asn Asp Ile Lys  
 245 250 255  
 Asn Leu Pro Cys Phe Gln Asn Lys Thr Leu Ile Ala Val Lys Ala Pro  
 260 265 270  
 His Gly Thr Thr Leu Glu Val Pro Asp Pro Asp Glu Ala Gly Gly Tyr  
 275 280 285  
 Gln Arg Arg Tyr Arg Ile Ile Leu Arg Ser Thr Met Gly Pro Ile Asp  
 290 295 300  
 Val Tyr Leu Val Ser Gln Phe Glu Glu Ser Phe Glu Asp Ile Pro Gln  
 305 310 315 320  
 Ala Asp Glu Pro Ser Asn Val Pro Asp Glu Pro Ser Asn Val Pro Asp  
 325 330 335  
 Val Pro Ser Asn Leu Pro Ser Thr Ser Gly Leu Pro Glu Asn His Asp  
 340 345 350  
 Val Ser Met Pro Met Lys Glu Glu Ser Thr Glu Arg Asn Met Glu Thr  
 355 360 365  
 Gln Glu Val Asp Asp Thr Gln Arg Val Tyr Ser Asp Ile Glu Ser His  
 370 375 380  
 Asp Phe Val Asp Gly Ile Met Lys Ile Val Pro Pro Asp Leu Asp Met  
 385 390 395 400  
 Gly Val Asp Tyr Trp Phe Arg Ser Glu Val Gly Glu Val Ser Ile Thr  
 405 410 415  
 Asp Met Trp Pro Asp Glu Ser Gly Pro Asp Trp Asn Gln Met Ile Thr  
 420 425 430  
 Phe Asp Gln Asp His Ala Gly Pro Ser Asp Asn Lys Ile Leu Glu Gln  
 435 440 445



Pro Gln Thr Pro Ser Ser Pro Thr Pro Glu Glu Ser Thr Ala Thr Arg  
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Ser Pro Thr Gly Ser  
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<210> 245

<211> 669

<212> DNA

<213> Arabidopsis thaliana

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 cggcttaatt cctccgccg tgattcagct ctacctaacg actcttcttg ctatcttcag 180  
 ctccgtagcc gccgtctcga gaaacctct tcgctgattg aaccgaaaca gccgcgaga 240  
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 gaaatggagg agttctttgc atatgcagag cagcagcaac agaggctatt catggagaag 600  
 tacaacttcg acattgtgaa tgatatcccc ctacagcgac gttacgaatg ggtgcaagtc 660  
 aaaccatga 669

<210> 246

<211> 222

<212> PRT

<213> Arabidopsis thaliana

<400> 246

Met Gly Lys Tyr Met Lys Lys Ser Lys Ile Thr Gly Asp Ile Ser Val  
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Met Glu Val Ser Lys Ala Thr Ala Pro Ser Pro Gly Val Arg Thr Arg  
 20 25 30

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Ala Ala Lys Thr Leu Ala Leu Lys Arg Leu Asn Ser Ser Ala Ala Asp  
35 40 45

Ser Ala Leu Pro Asn Asp Ser Ser Cys Tyr Leu Gln Leu Arg Ser Arg  
50 55 60

Arg Leu Glu Lys Pro Ser Ser Leu Ile Glu Pro Lys Gln Pro Pro Arg  
65 70 75 80

Val His Arg Ser Gly Ile Lys Glu Ser Gly Ser Arg Ser Arg Val Asp  
85 90 95

Ser Val Asn Ser Val Pro Val Ala Gln Ser Ser Asn Glu Asp Glu Cys  
100 105 110

Phe Asp Asn Phe Val Ser Val Gln Val Ser Cys Gly Glu Asn Ser Leu  
115 120 125

Gly Phe Glu Ser Arg His Ser Thr Arg Glu Ser Thr Pro Cys Asn Phe  
130 135 140

Val Glu Asp Met Glu Ile Met Val Thr Pro Gly Ser Ser Thr Arg Ser  
145 150 155 160

Met Cys Arg Ala Thr Lys Glu Tyr Thr Arg Glu Gln Asp Asn Val Ile  
165 170 175

Pro Thr Thr Ser Glu Met Glu Glu Phe Phe Ala Tyr Ala Glu Gln Gln  
180 185 190

Gln Gln Arg Leu Phe Met Glu Lys Tyr Asn Phe Asp Ile Val Asn Asp  
195 200 205

Ile Pro Leu Ser Gly Arg Tyr Glu Trp Val Gln Val Lys Pro  
210 215 220

<210> 247

<211> 1458

<212> DNA

<213> Arabidopsis thaliana

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catccaccgt catctccggt tccggttaca tctacgccgg ttataccacc tatacgtcgt 120  
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gatcgggagg	aagatgctgt	cgttgttaga	tctccttcac	gaaagagaaa	ggcgacaatg	300
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agcagtcctt	gtcaaaactc	tagaaaaagg	ggcagagtca	acatcaagtc	aaaggccaaa	420
ggaacaagt	caactccta	aacaccatc	tcgacaacg	ctggttctcc	tatcacactt	480
actccatcag	gaagtgtgct	ttatgacagt	tctttaggtc	tccttacaaa	aaagttcgtc	540
aatctaatta	aacaagccaa	agatggaatg	ctggacctaa	acaaagctgc	agaaacattg	600
gaggtgcaga	aacgacgtat	atatgatatt	acaaacgttt	tggaggggat	agatctcatt	660
gaaaagcctt	tcaagaatcg	aatactttgg	aagggagttg	atgcgtgtcc	tggcgatgag	720
gatgctgacg	tatctgtatt	acagctgcag	gcagaaattg	aaaacctcgc	cctcgaaagag	780
caagcattag	acaaccaa	cagacaaaca	gaggaaagat	taagagacct	gagcgaaaat	840
gaaaagaatc	agaaatggct	ttttgtaact	gaagaggata	tcaagagttt	accaggtttc	900
cagaaccaga	ctctgatagc	cgtaaagct	cctcatggca	caactttgga	agtgcttgat	960
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<210> 248

<211> 485

<212> PRT

<213> Arabidopsis thaliana

<400> 248

Met	Ser	Gly	Val	Val	Arg	Ser	Ser	Pro	Gly	Ser	Ser	Gln	Pro	Pro	Pro
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Pro Pro Pro His His Pro Pro Ser Ser Pro Val Pro Val Thr Ser Thr  
20 25 30

Pro Val Ile Pro Pro Ile Arg Arg His Leu Ala Phe Ala Ser Thr Lys  
35 40 45

Pro Pro Phe His Pro Ser Asp Asp Tyr His Arg Phe Asn Pro Ser Ser  
50 55 60

Leu Ser Asn Asn Asn Asp Arg Ser Phe Val His Gly Cys Gly Val Val  
65 70 75 80

Asp Arg Glu Glu Asp Ala Val Val Val Arg Ser Pro Ser Arg Lys Arg  
85 90 95

Lys Ala Thr Met Asp Met Val Val Ala Pro Ser Asn Asn Gly Phe Thr  
100 105 110

Ser Ser Gly Phe Thr Asn Ile Pro Ser Ser Pro Cys Gln Thr Pro Arg  
115 120 125

Lys Gly Gly Arg Val Asn Ile Lys Ser Lys Ala Lys Gly Asn Lys Ser  
130 135 140

Thr Pro Gln Thr Pro Ile Ser Thr Asn Ala Gly Ser Pro Ile Thr Leu  
145 150 155 160

Thr Pro Ser Gly Ser Cys Arg Tyr Asp Ser Ser Leu Gly Leu Leu Thr  
165 170 175

Lys Lys Phe Val Asn Leu Ile Lys Gln Ala Lys Asp Gly Met Leu Asp  
180 185 190

Leu Asn Lys Ala Ala Glu Thr Leu Glu Val Gln Lys Arg Arg Ile Tyr  
195 200 205

Asp Ile Thr Asn Val Leu Glu Gly Ile Asp Leu Ile Glu Lys Pro Phe  
210 215 220

Lys Asn Arg Ile Leu Trp Lys Gly Val Asp Ala Cys Pro Gly Asp Glu  
225 230 235 240

Asp Ala Asp Val Ser Val Leu Gln Leu Gln Ala Glu Ile Glu Asn Leu  
245 250 255

Ala Leu Glu Glu Gln Ala Leu Asp Asn Gln Ile Arg Gln Thr Glu Glu  
260 265 270

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Arg Leu Arg Asp Leu Ser Glu Asn Glu Lys Asn Gln Lys Trp Leu Phe  
275 280 285

Val Thr Glu Glu Asp Ile Lys Ser Leu Pro Gly Phe Gln Asn Gln Thr  
290 295 300

Leu Ile Ala Val Lys Ala Pro His Gly Thr Thr Leu Glu Val Pro Asp  
305 310 315 320

Pro Asp Glu Ala Ala Asp His Pro Gln Arg Arg Tyr Arg Ile Ile Leu  
325 330 335

Arg Ser Thr Met Gly Pro Ile Asp Val Tyr Leu Val Ser Glu Phe Glu  
340 345 350

Gly Lys Phe Glu Asp Thr Asn Gly Ser Gly Ala Ala Pro Pro Ala Cys  
355 360 365

Leu Pro Ile Ala Ser Ser Ser Gly Ser Thr Gly His His Asp Ile Glu  
370 375 380

Ala Leu Thr Val Asp Asn Pro Glu Thr Ala Ile Val Ser His Asp His  
385 390 395 400

Pro His Pro Gln Pro Gly Asp Thr Ser Asp Leu Asn Tyr Leu Gln Glu  
405 410 415

Gln Val Gly Gly Met Leu Lys Ile Thr Pro Ser Asp Val Glu Asn Asp  
420 425 430

Glu Ser Asp Tyr Trp Leu Leu Ser Asn Ala Glu Ile Ser Met Thr Asp  
435 440 445

Ile Trp Lys Thr Asp Ser Gly Ile Asp Trp Asp Tyr Gly Ile Ala Asp  
450 455 460

Val Ser Thr Pro Pro Pro Gly Met Gly Glu Ile Ala Pro Thr Ala Val  
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Asp Ser Thr Pro Arg  
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<210> 249

<211> 930

<212> DNA

<213> *Arabidopsis thaliana*

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gaagaaggta ttccaccaac tgctcttcgt gagatctcgc ttctccagat gttatcaaca    180
tcgatctatg ttgttcgatt actctgcgtc gaacatgttc atcaaccatc aaccaaattct    240
caatctacca aatccaatct ctatctcggt ttcgagtatc tcgatactga tcttaagaaa    300
ttcatcgatt cgtataggaa aggacctaata cctaagcctc ttgagccttt ttgattcag    360
aagtgtatgt ttcagctttg taaagggtgt gcgcattgtc atagtcattg tgtgcttcac    420
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ggtgattctg agtttcagca attgcttcatt atcttcaggt tgctaggaac accaactgag    720
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&lt;210&gt; 250

&lt;211&gt; 309

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 250

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Met Glu Lys Tyr Glu Lys Leu Glu Lys Val Gly Glu Gly Thr Tyr Gly
1      5      10
Lys Val Tyr Lys Ala Met Glu Lys Gly Thr Gly Lys Leu Val Ala Leu
20     25     30
Lys Lys Thr Arg Leu Glu Met Asp Glu Glu Gly Ile Pro Pro Thr Ala
35     40     45

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Leu Arg Glu Ile Ser Leu Leu Gln Met Leu Ser Thr Ser Ile Tyr Val  
 50 55 60  
 Val Arg Leu Leu Cys Val Glu His Val His Gln Pro Ser Thr Lys Ser  
 65 70 75  
 Gln Ser Thr Lys Ser Asn Leu Tyr Leu Val Phe Glu Tyr Leu Asp Thr  
 85 90 95  
 Asp Leu Lys Lys Phe Ile Asp Ser Tyr Arg Lys Gly Pro Asn Pro Lys  
 100 105 110  
 Pro Leu Glu Pro Phe Leu Ile Gln Lys Leu Met Phe Gln Leu Cys Lys  
 115 120 125  
 Gly Val Ala His Cys His Ser His Gly Val Leu His Arg Asp Leu Lys  
 130 135 140  
 Pro Gln Asn Leu Leu Leu Val Lys Asp Lys Glu Leu Leu Lys Ile Ala  
 145 150 155 160  
 Asp Leu Gly Leu Gly Arg Ala Phe Thr Val Pro Leu Lys Ser Tyr Thr  
 165 170 175  
 His Glu Ile Val Thr Leu Trp Tyr Arg Ala Pro Glu Val Leu Leu Gly  
 180 185 190  
 Ser Thr His Tyr Ser Thr Gly Val Asp Met Trp Ser Val Gly Cys Ile  
 195 200 205  
 Phe Ala Glu Met Val Arg Arg Gln Ala Leu Phe Pro Gly Asp Ser Glu  
 210 215 220  
 Phe Gln Gln Leu Leu His Ile Phe Arg Leu Leu Gly Thr Pro Thr Glu  
 225 230 235 240  
 Gln Gln Trp Pro Gly Val Ser Thr Leu Arg Asp Trp His Val Tyr Pro  
 245 250 255  
 Lys Trp Glu Pro Gln Asp Leu Thr Leu Ala Val Pro Ser Leu Ser Pro  
 260 265 270  
 Gln Gly Val Asp Leu Leu Thr Lys Met Leu Lys Tyr Asn Pro Ala Glu  
 275 280 285  
 Arg Ile Ser Ala Lys Thr Ala Leu Asp His Pro Tyr Phe Asp Ser Leu  
 290 295 300

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Asp Lys Ser Gln Phe  
305

<210> 251

<211> 1542

<212> DNA

<213> Arabidopsis thaliana

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<400> 251
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tttagtcctg gaccaatgac tctcgtctca aattttattct ctgatcctga tgagttcaag      180
tctttctctc agctttttagc tggagctatg gcttctccgg cggcagctgc tgttgccgcc      240
gctgctgtgg ttgctactgc tcatcatcag acacctgtga gctctgtcgg tgatggcggg      300
ggaagcgggt gtgatgttga cccgaggttt aagcagagta gaccaacggg attgatgata      360
actcaaccac cggggatgtt tactgtaccg ccgggggtta gtccgggtac tcttttggtat      420
tctccgagct tctttggctt tttttcacct cttcagggaa catttggtat gacacatcaa      480
caagctttag cacaagtacg tgcacaagca gttcaaggca ataatgttca tatgcagcaa      540
tcacaacaat ctgaatatcc ttcttctaca caacaacaac aacaacaaca acaacaagct      600
tcattgactg agattccatc attttcttct gcacctaggt ctgagattcg agcctcgggt      660
caagaacatc cgcagggtca gagagagact tcggaatat ctgtctttga gcatcggtca      720
cagcctcaaa atgctgacaa accagctgat gatggatata actggcgga atattggcag      780
aagcaagtga aggggagcga ttttcctcgg agttattaca aatgtacgca tccagcttgt      840
cctgtcaaga agaaagtgga gaggtcactc gatggacaag taacggaat catctacaag      900
ggtcaacaca atcatgagct tcctcaaaag cgcggtaaca ataacgggag ttgtaaaagt      960
tctgatattg caaatcagtt tcaacaagaat aatagcagtc tacaacaagag taagagggac      1020
caggaacaaa gccaaagtac aacaacagag cagatgtctg aagcaagtga tagcaggagg      1080
gttgggaatg cagagactag tggggagaa agacatgagg atgagcctga tcccaagcga      1140
agaaatacac aagttcgggt ttcagaacca gttgcttcat cgcatagaac tgtgacagag      1200
cctaggatta ttgtccaac gacgagtga gttgacctct tagatgatgg atataggtgg      1260
cgcaagtatg gtcagaaagt agtcaaagga aatccttctc cgaggagcta ctataagtg      1320
acaacaccag attgcggagt aaggaaacat gtagagagag cagcaactga cccaaaagct      1380
gttgtaacaa catatgaagg taaacataac catgatgttc cagctgctag aaccagcagc      1440

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047-E2F-PCT.ST25.txt

catcagttaa gaccaaacaa tcaacacaac acctcaacgg ttaacttcaa tcatcaacag 1500  
cctgttgac gttaaggct taaagaagag caaatcactt ga 1542

<210> 252

<211> 513

<212> PRT

<213> Arabidopsis thaliana

<400> 252

Met Ala Glu Lys Glu Glu Lys Glu Pro Ser Lys Leu Lys Ser Ser Thr  
1 5 10 15

Gly Val Ser Arg Pro Thr Ile Ser Leu Pro Pro Arg Pro Phe Gly Glu  
20 25 30

Met Phe Phe Ser Gly Gly Val Gly Phe Ser Pro Gly Pro Met Thr Leu  
35 40 45

Val Ser Asn Leu Phe Ser Asp Pro Asp Glu Phe Lys Ser Phe Ser Gln  
50 55 60

Leu Leu Ala Gly Ala Met Ala Ser Pro Ala Ala Ala Val Ala Ala  
65 70 75 80

Ala Ala Val Val Ala Thr Ala His His Gln Thr Pro Val Ser Ser Val  
85 90 95

Gly Asp Gly Gly Gly Ser Gly Gly Asp Val Asp Pro Arg Phe Lys Gln  
100 105 110

Ser Arg Pro Thr Gly Leu Met Ile Thr Gln Pro Pro Gly Met Phe Thr  
115 120 125

Val Pro Pro Gly Leu Ser Pro Ala Thr Leu Leu Asp Ser Pro Ser Phe  
130 135 140

Phe Gly Leu Phe Ser Pro Leu Gln Gly Thr Phe Gly Met Thr His Gln  
145 150 155 160

Gln Ala Leu Ala Gln Val Thr Ala Gln Ala Val Gln Gly Asn Asn Val  
165 170 175

His Met Gln Gln Ser Gln Gln Ser Glu Tyr Pro Ser Ser Thr Gln Gln  
Page 395

Gln Gln Gln Gln Gln Gln Gln Ala Ser Leu Thr Glu Ile Pro Ser Phe  
 195 200  
 Ser Ser Ala Pro Arg Ser Gln Ile Arg Ala Ser Val Gln Glu Thr Ser  
 210 215  
 Gln Gly Gln Arg Glu Thr Ser Glu Ile Ser Val Phe Glu His Arg Ser  
 225 230 235  
 Gln Pro Gln Asn Ala Asp Lys Pro Ala Asp Gly Tyr Asn Trp Arg  
 245 250 255  
 Lys Tyr Gly Gln Lys Gln Val Lys Gly Ser Asp Phe Pro Arg Ser Tyr  
 260 265  
 Tyr Lys Cys Thr His Pro Ala Cys Pro Val Lys Lys Lys Val Glu Arg  
 275 280  
 Ser Leu Asp Gly Gln Val Thr Glu Ile Ile Tyr Lys Gly Gln His Asn  
 290 295 300  
 His Glu Leu Pro Gln Lys Arg Gly Asn Asn Asn Gly Ser Cys Lys Ser  
 305 310 315  
 Ser Asp Ile Ala Asn Gln Phe Gln Thr Ser Asn Ser Ser Leu Asn Lys  
 325 330 335  
 Ser Lys Arg Asp Gln Glu Thr Ser Gln Val Thr Thr Thr Glu Gln Met  
 340 345 350  
 Ser Glu Ala Ser Asp Ser Glu Glu Val Gly Asn Ala Glu Thr Ser Val  
 355 360 365  
 Gly Glu Arg His Glu Asp Glu Pro Asp Pro Lys Arg Arg Asn Thr Glu  
 370 375 380  
 Val Arg Val Ser Glu Pro Val Ala Ser Ser His Arg Thr Val Thr Glu  
 385 390 395  
 Pro Arg Ile Ile Val Gln Thr Thr Ser Glu Val Asp Leu Leu Asp Asp  
 405 410 415  
 Gly Tyr Arg Trp Arg Lys Tyr Gly Gln Lys Val Val Lys Gly Asn Pro  
 420 425 430

Tyr Pro Arg Ser Tyr Tyr Lys Cys Thr Thr Pro Asp Cys Gly Val Arg  
 435 440 445

Lys His Val Glu Arg Ala Ala Thr Asp Pro Lys Ala Val Val Thr Thr  
 450 455 460

Tyr Glu Gly Lys His Asn His Asp Val Pro Ala Ala Arg Thr Ser Ser  
 465 470 475 480

His Gln Leu Arg Pro Asn Asn Gln His Asn Thr Ser Thr Val Asn Phe  
 485 490 495

Asn His Gln Gln Pro Val Ala Arg Leu Arg Leu Lys Glu Glu Gln Ile  
 500 505 510

Thr

<210> 253

<211> 1164

<212> DNA

<213> Arabidopsis thaliana

<400> 253  
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 actcgatctc taccatttca atgttctcct ctctttttct ctattccttc ttcaatcggt 120  
 tgcttctcca ctcaaaatcc cgaccgcaa gaggtccggt ggctccggga agagcagaga 180  
 tggattcgcg aggagcaacg atggattcgt gaagaacaga gatggatacg cgaactgaa 240  
 tcgcttctac aagagatttc ggatctacag ctcagaattc aatccctaga gtcacgaaat 300  
 tcgcaattgg ggaattctat tcccgatacg atttcaata tcgctgcttt gcttcagggt 360  
 ttgaaggaga agaatcgagt ttctgagagt ggattgagcg caacgccgat ggtattggag 420  
 agtacgagag aacaaattgt tgaggagggt gaagaagaag agaagcgagt gattattgct 480  
 gaagagaaaag ttagggtttc ggagccggtg aagaagatca agaggaggat attgaaagt 540  
 ggaagcgaag gcgacgatgt tcaagcttgc cagggaagctc tgtgaaatt aggattctat 600  
 tcgggcgaag aggatatgga gtctctgagc tttcaagtg ggactgcaag tgctgttaag 660  
 acttgcaag catcgcttgg ggtccgtgag gatggggtaa tgacagcaga gcttcttcag 720  
 aggttgttca tggatgaaga cgtagagaca gataaggatg aagcaagtac aatgaagaaa 780  
 gaggaagctg gtaatggggc ggtatttact tcagtgcac aagtccttga gaagaagcaa 840

tcaatcgtga aagatcaaag tgacagagaa gttgacgtta ctcaaaatcg ggtttttctt 900  
 cttggagaaa acagatggga agatccctcc aggcctcattg gcaggaacaa accggtagac 960  
 agaagtgaat caacaaacac caaaacgagg tgcatacctt gtcgagggga gggctgattg 1020  
 atgtgcctag agtgcgatgg aaccggtgag ccaaacattg agccgcagtt catggagtgg 1080  
 gttggtgaag atacgaagtg tccgtactgt gaaggtcttg gctatacagt ttgcgatgtc 1140  
 tgcgcaggca aaaaaaactt ataa 1164

<210> 254

<211> 387

<212> PRT

<213> Arabidopsis thaliana

<400> 254

Met Ala Ser Ser Ser Leu Pro Leu Ser Leu Pro Phe Pro Leu Arg Ser  
 1 5 10 15

Leu Thr Ser Thr Thr Arg Ser Leu Pro Phe Gln Cys Ser Pro Leu Phe  
 20 25 30

Phe Ser Ile Pro Ser Ser Ile Val Cys Phe Ser Thr Gln Asn Pro Asp  
 35 40 45

Arg Glu Glu Val Arg Trp Leu Arg Glu Glu Gln Arg Trp Ile Arg Glu  
 50 55 60

Glu Gln Arg Trp Ile Arg Glu Glu Gln Arg Trp Ile Arg Glu Arg Glu  
 65 70 75 80

Ser Leu Leu Gln Glu Ile Ser Asp Leu Gln Leu Arg Ile Gln Ser Leu  
 85 90 95

Glu Ser Arg Asn Ser Gln Leu Gly Asn Ser Ile Pro Asp Thr Ile Ser  
 100 105 110

Asn Ile Ala Ala Leu Leu Gln Val Leu Lys Glu Lys Asn Arg Ile Ser  
 115 120 125

Glu Ser Gly Leu Ser Ala Thr Pro Met Val Leu Glu Ser Thr Arg Glu  
 130 135 140

Gln Ile Val Glu Glu Val Glu Glu Glu Glu Lys Arg Val Ile Ile Ala  
 145 150 155 160

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Glu Glu Lys Val Arg Val Ser Glu Pro Val Lys Lys Ile Lys Arg Arg  
 165 175  
 Ile Leu Lys Val Gly Ser Glu Gly Asp Asp Val Gln Ala Leu Gln Glu  
 180 185 190  
 Ala Leu Leu Lys Leu Gly Phe Tyr Ser Gly Glu Glu Asp Met Glu Phe  
 195 200 205  
 Ser Ser Phe Ser Ser Gly Thr Ala Ser Ala Val Lys Thr Trp Gln Ala  
 210 215 220  
 Ser Leu Gly Val Arg Glu Asp Gly Val Met Thr Ala Glu Leu Leu Gln  
 225 230 235 240  
 Arg Leu Phe Met Asp Glu Asp Val Glu Thr Asp Lys Asp Glu Ala Ser  
 245 250 255  
 Thr Met Lys Lys Glu Glu Ala Gly Asn Gly Ala Val Phe Thr Ser Val  
 260 265 270  
 Thr Gln Val Pro Glu Lys Lys Gln Ser Ile Val Lys Asp Gln Ser Asp  
 275 280 285  
 Arg Glu Val Asp Val Thr Gln Asn Arg Val Phe Leu Leu Gly Glu Asn  
 290 295 300  
 Arg Trp Glu Asp Pro Ser Arg Leu Ile Gly Arg Asn Lys Pro Val Asp  
 305 310 315 320  
 Arg Ser Glu Ser Thr Asn Thr Lys Thr Arg Cys Ile Thr Cys Arg Gly  
 325 330 335  
 Glu Gly Arg Leu Met Cys Leu Glu Cys Asp Gly Thr Gly Glu Pro Asn  
 340 345 350  
 Ile Glu Pro Gln Phe Met Glu Trp Val Gly Glu Asp Thr Lys Cys Pro  
 355 360 365  
 Tyr Cys Glu Gly Leu Gly Tyr Thr Val Cys Asp Val Cys Asp Gly Lys  
 370 375 380  
 Lys Asn Leu  
 385

<210> 255

&lt;211&gt; 849

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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<400> 255
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cgtggaagg tgcgcgacag agatggaaaag cttctatctc tctcgctcga caaatcctct 180
ggatccggtt ttcagtccaa ccaggagttt ctctatggca aagccgaggt tcaaatgaaa 240
ctgtccctg gtaactcagc tggaacagta acaacattct atcttaagtc tccgggaact 300
acgtgggatg agattgattt cgagttctta ggaaacctaa gtggctatcc gtatactctc 360
cataactaag ttacacaaa aggctcagga gacaaagaac aacaatttca tctatggttc 420
gacccaactg ttaactttca cacttattgc atcacatgga atcccaaag gattatTTTT 480
acagttgatg gaattcctat tagagagttc aagaactccg agtcaattgg agttccgttc 540
ccaacgaagc aaccaatgag gctttacgcy agtctctggg aagccgagca ttgggtcaca 600
aggggagggg tagagaaaaa agattggtca aaggctcctt tcaccgcttt ctacagaaac 660
tacaatgttg aaggatgtgt atgggctaata ggaaaatcat cttgtcccg c aaattcctca 720
tggttcactc aacaactcga ttcaaacggc cagacaagaa tgaaaggggt acagagtaag 780
tatatgggtc acaactattg taacgacaaa agaagggttc ctcgaggtgt tcctgtagag 840
tgcagttaa 849

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&lt;210&gt; 256

&lt;211&gt; 282

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 256

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Met Lys Leu Ser Cys Gly Thr Ser Phe Ala Phe Leu Ile Met Phe Leu
1      5      10

```

```

Phe Ala Ala Gln Ser Met His Val Tyr Ala Gly Ser Phe His Lys Asp
20      25      30

```

```

Val Gln Ile His Trp Gly Asp Gly Arg Gly Lys Val Arg Asp Arg Asp
35      40      45

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047-E2F-PCT.ST25.txt

Gly Lys Leu Leu Ser Leu Ser Leu Asp Lys Ser Ser Gly Ser Gly Phe  
 50 55 60  
 Gln Ser Asn Gln Glu Phe Leu Tyr Gly Lys Ala Glu Val Gln Met Lys  
 65 70 75  
 Leu Val Pro Gly Asn Ser Ala Gly Thr Val Thr Thr Phe Tyr Leu Lys  
 85 90 95  
 Ser Pro Gly Thr Thr Trp Asp Glu Ile Asp Phe Glu Phe Leu Gly Asn  
 100 105 110  
 Leu Ser Gly His Pro Tyr Thr Leu His Thr Asn Val Tyr Thr Lys Gly  
 115 120 125  
 Ser Gly Asp Lys Glu Gln Gln Phe His Leu Trp Phe Asp Pro Thr Val  
 130 135 140  
 Asn Phe His Thr Tyr Cys Ile Thr Trp Asn Pro Gln Arg Ile Ile Phe  
 145 150 155 160  
 Thr Val Asp Gly Ile Pro Ile Arg Glu Phe Lys Asn Ser Glu Ser Ile  
 165 170 175  
 Gly Val Pro Phe Pro Thr Lys Gln Pro Met Arg Leu Tyr Ala Ser Leu  
 180 185 190  
 Trp Glu Ala Glu His Trp Ala Thr Arg Gly Gly Leu Glu Lys Thr Asp  
 195 200 205  
 Trp Ser Lys Ala Pro Phe Thr Ala Phe Tyr Arg Asn Tyr Asn Val Glu  
 210 215 220  
 Gly Cys Val Trp Ala Asn Gly Lys Ser Ser Cys Pro Ala Asn Ser Ser  
 225 230 235 240  
 Trp Phe Thr Gln Gln Leu Asp Ser Asn Gly Gln Thr Arg Met Lys Gly  
 245 250 255  
 Val Gln Ser Lys Tyr Met Val Tyr Asn Tyr Cys Asn Asp Lys Arg Arg  
 260 265 270  
 Phe Pro Arg Gly Val Pro Val Glu Cys Ser  
 275 280

<210> 257

&lt;211&gt; 468

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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<400> 257
atgcattaca tgggtttgtt tagtagagct ggaaacatat ttaggcagcc tagagcgttg      60
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ggaggtctct caccatctac tgatgtggag ctcttgaag aagcttttgg cagttttgga      180
aaaattgttg atgcggtagt ggttttggac cgtgaaagt gtttatcaag gggctttggt      240
ttcgtaacat atgattcgat cgaagtgtct aataacgcaa tgcaagctat gcaaaataag      300
gagcttgatg ggcgaataat tggagtgcac ccagctgatt caggaggtgg tgggggtggt      360
ggtgggtttg caagaagggg aggttatggt ggtggtcgtg ggggatatgc tcgtggtgga      420
tttggtcgcg gtgatttggg tgggtgtggc tatggctttg ttcgttaa      468

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&lt;210&gt; 258

&lt;211&gt; 155

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 258

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Met His Tyr Met Gly Leu Phe Ser Arg Ala Gly Asn Ile Phe Arg Gln
1      5      10      15
Pro Arg Ala Leu Gln Ala Ser Asn Ala Met Leu Gln Gly Asn Leu Ser
20     25     30
Leu Thr Pro Ser Lys Ile Phe Val Gly Gly Leu Ser Pro Ser Thr Asp
35     40     45
Val Glu Leu Leu Lys Glu Ala Phe Gly Ser Phe Gly Lys Ile Val Asp
50     55     60
Ala val val val Leu Asp Arg Glu Ser Gly Leu Ser Arg Gly Phe Gly
65     70     75     80
Phe Val Thr Tyr Asp Ser Ile Glu Val Ala Asn Asn Ala Met Gln Ala
85     90     95

```



Met Gln Asn Lys Glu Leu Asp Gly Arg Ile Ile Gly Val His Pro Ala  
 100 105 110

Asp Ser Gly Gly Gly Gly Gly Gly Gly Gly Phe Ala Arg Arg Gly Gly  
 115 120 125

Tyr Gly Gly Gly Arg Gly Gly Tyr Ala Arg Gly Gly Phe Gly Arg Gly  
 130 135 140

Gly Phe Gly Gly Gly Gly Tyr Gly Phe Val Arg  
 145 150 155

<210> 259

<211> 1215

<212> DNA

<213> Arabidopsis thaliana

<400> 259  
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 ttaaccgtga acggccagtc actttgtaac acacacaggt tcaccaataa cctcgccttc 120  
 gcagattgct ctgacctctc ggccttaggc tctttccttc actggaccta caatgaacaa 180  
 aacggtaccg tctcaatcgc ctatcgccac cctggaacct ctgcttcttc ttgggttgct 240  
 tggggactta acccaagtag tactcagatg gttgggacgc aagctctcgt agccttcaca 300  
 aacacaacaa ctaaccaatt ccaggcctat acctcttcg tgagttccta tggtagcgcg 360  
 cttgaacgta gtacgctaag tttcgggtg agtggtctct ccgcgactct ggtcagtggc 420  
 gaggttacga tctttgcaac tcttgagttg tctccgaate tgatcacggc caaccagctt 480  
 tggcagggtg gacctgtgt caacggtgtt cctgcgagtc atcaaacctc aggagataat 540  
 atgagatcga gtggtaggat tgatttcgg actggtcagg catcagctgg tgggtggtgt 600  
 tccggtgaca ggctgaggaa gagaacacg catggagtag taaatgcggt cagctgggga 660  
 gtactaatgc caatgggagc aatgatggct cggtacatga aagtcttcgc cgatccaaca 720  
 tggttctatc tccacattgc ctttcaagtg tcgggttacg tcatcggggt agccggttgg 780  
 gccaccggaa tcaagcttgg taacgactca ccaggcacat ctactcaac ccactgtaac 840  
 cttggaatag cactcttcac atttgccaca cttcaagtat ttgctctgct tgtaaggcca 900  
 aagccagacc acaaatatcg aacgtactgg aacgtgtacc atcacaccgt tggatacaca 960  
 accatcatcc tctctattgt caacatttcc aaaggattcg acattttgga cccggaggat 1020  
 aatggcgat gggcttacat tgggatcctc atctttcttg gtgcttgtgt ccttattctc 1080

gagccactca cttggttcac tgtctcttcgc cgttaagagcc gtggaggtaa cacagtcgct 1140  
gcaccaactt cgagcaagta ctctaacggc gtcaatggta ccaccaccac tggaccacat 1200  
caccaggacg cctag 1215

<210> 260

<211> 404

<212> PRT

<213> Arabidopsis thaliana

<400> 260

Met Asp Arg Thr Gln Ser Pro Lys Thr Ala Leu Phe Ala Val Leu Ala  
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Thr Leu Leu Val Leu Thr Val Asn Gly Gln Ser Leu Cys Asn Thr His  
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Arg Phe Thr Asn Asn Leu Ala Phe Ala Asp Cys Ser Asp Leu Ser Ala  
35 40 45  
Leu Gly Ser Phe Leu His Trp Thr Tyr Asn Glu Gln Asn Gly Thr Val  
50 55 60  
Ser Ile Ala Tyr Arg His Pro Gly Thr Ser Ala Ser Ser Trp Val Ala  
65 70 75 80  
Trp Gly Leu Asn Pro Ser Ser Thr Gln Met Val Gly Thr Gln Ala Leu  
85 90 95  
Val Ala Phe Thr Asn Thr Thr Thr Asn Gln Phe Gln Ala Tyr Thr Ser  
100 105 110  
Ser Val Ser Ser Tyr Gly Thr Arg Leu Glu Arg Ser Ser Leu Ser Phe  
115 120 125  
Gly Val Ser Gly Leu Ser Ala Thr Leu Val Ser Gly Glu Val Thr Ile  
130 135 140  
Phe Ala Thr Leu Glu Leu Ser Pro Asn Leu Ile Thr Ala Asn Gln Leu  
145 150 155 160  
Trp Gln Val Gly Pro Val Val Asn Gly Val Pro Ala Ser His Gln Thr  
165 170 175

Ser Gly Asp Asn Met Arg Ser Ser Gly Arg Ile Asp Phe Arg Thr Gly  
 180 185 190

Gln Ala Ser Ala Gly Gly Gly Gly Ser Gly Asp Arg Leu Arg Lys Arg  
 195 200 205

Asn Thr His Gly Val Leu Asn Ala Val Ser Trp Gly Val Leu Met Pro  
 210 215 220

Met Gly Ala Met Met Ala Arg Tyr Met Lys Val Phe Ala Asp Pro Thr  
 225 230 235 240

Trp Phe Tyr Leu His Ile Ala Phe Gln Val Ser Gly Tyr Val Ile Gly  
 245 250 255

Val Ala Gly Trp Ala Thr Gly Ile Lys Leu Gly Asn Asp Ser Pro Gly  
 260 265 270

Thr Ser Tyr Ser Thr His Arg Asn Leu Gly Ile Ala Leu Phe Thr Phe  
 275 280 285

Ala Thr Leu Gln Val Phe Ala Leu Leu Val Arg Pro Lys Pro Asp His  
 290 295 300

Lys Tyr Arg Thr Tyr Trp Asn Val Tyr His His Thr Val Gly Tyr Thr  
 305 310 315 320

Thr Ile Ile Leu Ser Ile Val Asn Ile Phe Lys Gly Phe Asp Ile Leu  
 325 330 335

Asp Pro Glu Asp Lys Trp Arg Trp Ala Tyr Ile Gly Ile Leu Ile Phe  
 340 345 350

Leu Gly Ala Cys Val Leu Ile Leu Glu Pro Leu Thr Trp Phe Ile Val  
 355 360 365

Leu Arg Arg Lys Ser Arg Gly Gly Asn Thr Val Ala Ala Pro Thr Ser  
 370 375 380

Ser Lys Tyr Ser Asn Gly Val Asn Gly Thr Thr Thr Thr Gly Pro His  
 385 390 395 400

His Gln Asp Ala

<210> 261

<211> 1098

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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<400> 261
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tctgaaactg cacagaaggg tcctccagtt gtgaagttgc agcctattga agtacctatt    180
atccctttta gtgaactcaa agaagcaact gatgattttg gatcgaattc tctcatcggt    240
gaaggctcct atggaagagt atactacggg gtattaaaca atgatctgcc ttcacgcgatt    300
aaaaagttgg attctaacaa acagcctgac aatgaattcc ttgctcaggt ttccatggtt    360
tctaggctta aacatgataa ctttgttcaa cttcttggtc actgtgttga tgggaattca    420
cggatacttt cttatgaatt tgccaataat ggatctcttc atgatattct tcatgggaga    480
aaagggtgtga aaggagcaca gccaggtcct gtcttgtcgt ggtatcaacg agtcaaaatt    540
gcagttggag ctgcaagagg cttgagtac ttgcatgaaa aagctaattc tcacatcatt    600
caccgtgaca ttaaatccag caatgtcctc ctctttgaag atgatgttgc caaaattgct    660
gactttgatc tctctaatca agctcctgat atggcagctc gccttcattc caccgagtt    720
cttgggactt ttgggtacca tgcccctgaa tatgcaatga ccgggcagtt aaatgccaag    780
agtgtgtctc acagctttgg agttgtctta ctggaacttc ttacaggctg aaagcctggt    840
gatcatagac taccagagag ccagcaaagt ttagtcacat gggctacacc taaactgagt    900
gaagacaagg ttaacaatg cgttgatgca agactcggtg gcgattacc tccaaaagct    960
gttgctaagt tagccgcggt tgctgcgttg tgtgtgcaat atgaagcaga ttttaggccg   1020
aatatgagta tcgttgtcaa agctcttcaa cctttgttga atgctcgagc cgtagctcca   1080
ggggaaggag tacattag                                     1098

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&lt;210&gt; 262

&lt;211&gt; 365

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 262

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Met Ser Cys Phe Gly Cys Cys Gly Glu Asp Asp Asp Met His Lys Thr
1          5          10          15

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Ala Asp Tyr Gly Gly Arg His Asn Gln Ala Lys His Phe Pro Pro Gly  
 20 25 30  
 Asn Asp Ala Arg His His Gln Ala Ser Glu Thr Ala Gln Lys Gly Pro  
 35 40 45  
 Pro Val Val Lys Leu Gln Pro Ile Glu Val Pro Ile Ile Pro Phe Ser  
 50 55 60  
 Glu Leu Lys Glu Ala Thr Asp Asp Phe Gly Ser Asn Ser Leu Ile Gly  
 65 70 75 80  
 Glu Gly Ser Tyr Gly Arg Val Tyr Tyr Gly Val Leu Asn Asn Asp Leu  
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 Tyr Glu Phe Ala Asn Asn Gly Ser Leu His Asp Ile Leu His Gly Arg  
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 165 170 175  
 Arg Val Lys Ile Ala Val Gly Ala Ala Arg Gly Leu Glu Tyr Leu His  
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 Glu Lys Ala Asn Pro His Ile Ile His Arg Asp Ile Lys Ser Ser Asn  
 195 200 205  
 Val Leu Leu Phe Glu Asp Asp Val Ala Lys Ile Ala Asp Phe Asp Leu  
 210 215 220  
 Ser Asn Gln Ala Pro Asp Met Ala Ala Arg Leu His Ser Thr Arg Val  
 225 230 235 240  
 Leu Gly Thr Phe Gly Tyr His Ala Pro Glu Tyr Ala Met Thr Gly Gln  
 245 250 255  
 Leu Asn Ala Lys Ser Asp Val Tyr Ser Phe Gly Val Val Leu Leu Glu  
 260 265 270

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Leu Leu Thr Gly Arg Lys Pro Val Asp His Arg Leu Pro Arg Gly Gln  
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Gln Ser Leu Val Thr Trp Ala Thr Pro Lys Leu Ser Glu Asp Lys Val  
290 295 300

Lys Gln Cys Val Asp Ala Arg Leu Gly Gly Asp Tyr Pro Pro Lys Ala  
305 310 315 320

Val Ala Lys Leu Ala Ala Val Ala Ala Leu Cys Val Gln Tyr Glu Ala  
325 330 335

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&lt;210&gt; 264

&lt;211&gt; 535

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 264

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Leu Ala Ala Thr Leu Val Ala Ala Leu Gly Ala Gln Cys Tyr Arg Leu
20           25           30

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```

Thr Leu Pro Pro Ser Pro Pro Pro Arg Ile Leu Thr Pro Gln Val Pro
35           40           45

```

```

Pro Ser Ser Ala Thr Met Ala Ser Ser Phe Asn Pro Thr Arg Ile Leu
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```

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Asp His Arg Ala Ser Ser His Arg Asn Arg Arg Gly Ala Phe Pro Ala
65           70           75           80

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Ser Lys Arg Arg Arg Leu Val Asp Glu Pro Ile Asp Tyr Pro Asp Leu
85           90           95

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047-E2F-PCT.ST25.txt

Ser Asn Pro Ala Tyr Gln Val Leu Ser Thr Pro Leu Phe Ala Ser Gly  
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115 120

Ser Ser Gln Pro Pro Ser Val Ser Ile Pro Pro Pro Ser Ala Pro Pro  
130 135 140

Leu Val Leu Ser Asp Ser Lys Asp Ala Glu Pro Ala Gly Leu Thr Asn  
145 150 155

Pro Ser Ala Pro Pro Ser Pro Leu Ala Pro Lys Asn Ile Thr Pro Val  
165 170 175

Ala Ser Pro Val Ala Asp Val Pro Met Pro Asp Pro Leu Ile Ser Pro  
180 185 190

Thr Ala Glu Thr Ala Glu Gly Ala Ser Val Pro Asp Ala Ala Val Ser  
195 200 205

Tyr Ala Ala Arg Ala Ala Ala His Arg Gln Val Phe Ala Glu Arg Asp  
210 215 220

Glu Leu Asp Arg Thr Leu Arg Arg Pro Leu Val Pro Pro His Thr Lys  
225 230 235 240

Arg Phe Leu Ser Ala Ala Ala Ala Glu Arg Tyr Lys His Ile Ala Lys  
245 250 255

Arg Asp Phe Ile Phe Gln Lys Thr Leu Pro Leu Asp Pro Glu Val Leu  
260 265 270

Thr Ala Thr Lys Tyr Phe Leu Glu His Ser Gly Met Ala Gln Thr Val  
275 280 285

Val Ala Val Glu Gln Phe Val Pro Glu Val Val Arg Glu Phe Tyr Ala  
290 295 300

Asn Leu Pro Glu Met Glu Tyr Arg Glu Cys Gly Leu Asp Leu Val Tyr  
305 310 315 320

Val Arg Gly Lys Met Tyr Glu Phe Ser Pro Ala Leu Ile Asn His Met  
325 330 335

Phe Ser Ile Asp Asp Ser Ala Leu Asp Pro Glu Ala Pro Val Thr Leu  
340 345 350



047-E2F-PCT.ST25.txt

Ser Thr Ala Ser Arg Asp Asp Leu Ala Leu Met Met Thr Gly Gly Thr  
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Thr Arg Arg Trp Leu Arg Leu Gln Pro Ala Asp His Leu Asp Thr Met  
370 375 380

Lys Met Leu His Lys Val Cys Cys Gly Asn Trp Phe Pro Thr Thr Asn  
385 390 395 400

Thr Ser Thr Leu Arg Val Asp Arg Leu Arg Leu Ile Asp Met Gly Thr  
405 410 415

His Gly Lys Ser Phe Asn Leu Gly Lys Leu Val Val Thr His Thr Met  
420 425 430

Ser Leu Ala Arg Leu Gly Pro Leu Ser Ser His Arg Leu Ala Tyr Pro  
435 440 445

Asn Leu Ile Tyr Gln Leu Leu Thr Phe Gln Arg Asp Val Arg Ser Arg  
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Pro Arg Asp Thr Leu Ser Asp Glu Pro Gly Val Phe Val Asn Asp Pro  
465 470 475 480

Pro Pro Thr Gln Pro Thr Gln Ala Pro Pro Pro Met Gly His Lys Leu  
485 490 495

Leu Leu Glu Asp Ile Asn Asp Leu Leu Glu Ile Gly Lys Arg Ile Arg  
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<211> 1692

<212> DNA

<213> Arabidopsis thaliana

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&lt;211&gt; 563

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 266

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65 70 75 80Leu Ala His Glu Gln Glu Met Leu Thr Gly Ala Ala Ile Phe Asn Met  
85 90 95Lys Arg Leu Val Gly Arg Val Asp Thr Asp Pro Val Val His Ala Ser  
100 105 110Lys Asn Leu Pro Phe Leu Val Gln Thr Leu Asp Ile Gly Val Arg Pro  
115 120 125Phe Ile Ala Ala Leu Val Asn Asn Ala Trp Arg Ser Thr Thr Pro Glu  
130 135 140Glu Val Leu Ala Ile Phe Leu Val Glu Leu Arg Leu Met Ala Glu Ala  
145 150 155 160Gln Leu Lys Arg Pro Val Arg Asn Val Val Leu Thr Val Pro Val Ser  
165 170 175Phe Ser Arg Phe Gln Leu Thr Arg Phe Glu Arg Ala Cys Ala Met Ala  
180 185 190Gly Leu His Val Leu Arg Leu Met Pro Glu Pro Thr Ala Ile Ala Leu  
195 200 205Leu Tyr Ala Gln Gln Gln Gln Met Thr Thr His Asp Asn Met Gly Ser  
210 215 220Gly Ser Glu Arg Leu Ala Val Ile Phe Asn Met Gly Ala Gly Tyr Cys  
Page 413

225 230 240  
Asp Val Ala Val Thr Ala Thr Ala Gly Gly Val Ser Gln Ile Lys Ala  
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Ala Ala Gln Asp Ala Ile His Arg Leu Thr Asp Gln Glu Asn Val Gln  
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Arg Leu Glu Phe Glu Glu Val Asn Gln Lys Val Phe Glu Glu Cys Glu  
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Val Asn Pro Leu Glu Ala Ala Val Arg Gly Ala Ala Leu Glu Gly Ala  
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Val Thr Ser Gly Ile His Asp Pro Phe Gly Ser Leu Asp Leu Leu Thr  
405 410 415  
Ile Gln Ala Thr Pro Leu Ala Val Gly Val Arg Ala Asn Gly Asn Lys  
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Phe Ile Pro Val Ile Pro Arg Asn Thr Met Val Pro Ala Arg Lys Asp  
435 440 445  
Leu Phe Phe Thr Thr Val Gln Asp Asn Gln Lys Glu Ala Leu Ile Ile  
450 455 460  
Ile Tyr Glu Gly Glu Gly Glu Thr Val Glu Glu Asn His Leu Leu Gly  
465 470 475 480

Tyr Phe Lys Leu Val Gly Ile Pro Pro Ala Pro Lys Gly Val Pro Glu  
485 490 495

Ile Asn Val Cys Met Asp Ile Asp Ala Ser Asn Ala Leu Arg Val Phe  
500 505 510

Ala Ala Val Leu Met Pro Gly Ser Ser Ser Pro Val Val Pro Val Ile  
515 520 525

Glu Val Arg Met Pro Thr Val Asp Asp Gly His Gly Trp Cys Ala Gln  
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Ala Leu Asn Val Lys Tyr Gly Ala Thr Leu Asp Leu Ile Thr Leu Gln  
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<211> 2754

<212> DNA

<213> Arabidopsis thaliana

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&lt;211&gt; 917

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 268

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20 25 30Asp Ser Pro Lys Ala His Gln Asn Gln Thr Thr Asn Gln Thr Val Phe  
35 40 45Leu Lys Pro Ala Lys Val His Asp Asp Asp Glu Asp Val Ser Ser Glu  
50 55 60Asp Glu Asn Glu Thr His Asn Ser Asn Ala Val Tyr Tyr Lys Glu Met  
65 70 75 80Ile Arg Lys Ser Asn Ala Glu Leu Glu Pro Ser Val Leu Asp Pro Arg  
85 90 95Asp Glu Tyr Thr Ala Asp Ser Trp Ile Glu Arg Asn Pro Ser Met Val  
100 105 110Arg Leu Thr Gly Lys His Pro Phe Asn Ser Glu Ala Pro Leu Asn Arg  
115 120 125Leu Met His His Gly Phe Ile Thr Pro Val Pro Leu His Tyr Val Arg  
130 135 140Asn His Gly His Val Pro Lys Ala Gln Trp Ala Glu Trp Thr Val Glu  
145 150 155 160Val Thr Gly Phe Val Lys Arg Pro Met Lys Phe Thr Met Asp Gln Leu  
165 170 175Val Ser Glu Phe Ala Tyr Arg Glu Phe Ala Ala Thr Leu Val Cys Ala  
180 185 190Gly Asn Arg Arg Lys Glu Gln Asn Met Val Lys Lys Ser Lys Gly Phe  
417

195  
 200 047-E2F-PCT.ST25.txt  
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Asn Trp Gly Ser Ala Gly Val Ser Thr Ser Val Trp Arg Gly Val Pro  
 210 215

Leu Cys Asp Val Leu Arg Arg Cys Gly Ile Phe Ser Arg Lys Gly Gly  
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Ala Leu Asn Val Cys Phe Glu Gly Ser Glu Asp Leu Pro Gly Gly Ala  
 245 250 255

Gly Thr Ala Gly Ser Lys Tyr Gly Thr Ser Ile Lys Lys Glu Tyr Ala  
 260 265 270

Met Asp Pro Ser Arg Asp Ile Ile Leu Ala Tyr Met Gln Asn Gly Glu  
 275 280 285

Tyr Leu Thr Pro Asp His Gly Phe Pro Val Arg Ile Ile Ile Pro Gly  
 290 295 300

Phe Ile Gly Gly Arg Met Val Lys Trp Leu Lys Arg Ile Ile Val Thr  
 305 310 315 320

Thr Lys Glu Ser Asp Asn Phe Tyr His Phe Lys Asp Asn Arg Val Leu  
 325 330 335

Pro Ser Leu Val Asp Ala Glu Leu Ala Asp Glu Glu Gly Trp Trp Tyr  
 340 345 350

Lys Pro Glu Tyr Ile Ile Asn Glu Leu Asn Ile Asn Ser Val Ile Thr  
 355 360 365

Thr Pro Cys His Glu Glu Ile Leu Pro Ile Asn Ala Phe Thr Thr Gln  
 370 375 380

Arg Pro Tyr Thr Leu Lys Gly Tyr Ala Tyr Ser Gly Gly Gly Lys Lys  
 385 390 395 400

Val Thr Arg Val Glu Val Thr Val Asp Gly Gly Glu Thr Trp Asn Val  
 405 410 415

Cys Ala Leu Asp His Gln Glu Lys Pro Asn Lys Tyr Gly Lys Phe Trp  
 420 425 430

Cys Trp Cys Phe Trp Ser Leu Glu Val Glu Val Leu Asp Leu Leu Ser  
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047-E2F-PCT.ST25.txt

Ala Lys Glu Ile Ala Val Arg Ala Trp Asp Glu Thr Leu Asn Thr Gln  
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Phe Arg Val Lys Thr Asn Val Cys Lys Pro His Lys Gly Glu Ile Gly  
485 490 495

Ile Val Phe Glu His Pro Thr Leu Pro Gly Asn Glu Ser Gly Gly Trp  
500 505 510

Met Ala Lys Glu Arg His Leu Glu Lys Ser Ala Asp Ala Pro Pro Ser  
515 520 525

Leu Lys Lys Ser Val Ser Thr Pro Phe Met Asn Thr Thr Ala Lys Met  
530 535 540

Tyr Ser Met Ser Glu Val Lys Lys His Asn Ser Ala Asp Ser Cys Trp  
545 550 555 560

Ile Ile Val His Gly His Ile Tyr Asp Cys Thr Arg Phe Leu Met Asp  
565 570 575

His Pro Gly Gly Ser Asp Ser Ile Leu Ile Asn Ala Gly Thr Asp Cys  
580 585 590

Thr Glu Glu Phe Glu Ala Ile His Ser Asp Lys Ala Lys Lys Met Leu  
595 600 605

Glu Asp Tyr Arg Ile Gly Glu Leu Ile Thr Thr Gly Tyr Ser Ser Asp  
610 615 620

Ser Ser Ser Pro Asn Asn Ser Val His Gly Ser Ser Ala Val Phe Ser  
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Val Asn Pro Arg Ala Lys Val Pro Val Gln Leu Val Glu Lys Thr Ser  
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Ile Ser His Asp Val Arg Lys Phe Arg Phe Ala Leu Pro Val Glu Asp  
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Met Val Leu Gly Leu Pro Val Gly Lys His Ile Phe Leu Cys Ala Thr  
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047-E2F-PCT.ST25.txt

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Asp Val Val Gly Tyr Phe Glu Leu Val Val Lys Ile Tyr Phe Gly Gly  
725 730 735

Val His Pro Arg Phe Pro Asn Gly Gly Leu Met Ser Gln Tyr Leu Asp  
740 745 750

Ser Leu Pro Ile Gly Ser Thr Leu Glu Ile Lys Gly Pro Leu Gly His  
755 760 765

Val Glu Tyr Leu Gly Lys Gly Ser Phe Thr Val His Gly Lys Pro Lys  
770 775 780

Phe Ala Asp Lys Leu Ala Met Leu Ala Gly Gly Thr Gly Ile Thr Pro  
785 790 795 800

Val Tyr Gln Ile Ile Gln Ala Ile Leu Lys Asp Pro Glu Asp Glu Thr  
805 810 815

Glu Met Tyr Val Ile Tyr Ala Asn Arg Thr Glu Glu Asp Ile Leu Leu  
820 825 830

Arg Glu Glu Leu Asp Gly Trp Ala Glu Gln Tyr Pro Asp Arg Leu Lys  
835 840 845

Val Trp Tyr Val Val Glu Ser Ala Lys Glu Gly Trp Ala Tyr Ser Thr  
850 855 860

Gly Phe Ile Ser Glu Ala Ile Met Arg Glu His Ile Pro Asp Gly Leu  
865 870 875 880

Asp Gly Ser Ala Leu Ala Met Ala Cys Gly Pro Pro Pro Met Ile Gln  
885 890 895

Phe Ala Val Gln Pro Asn Leu Glu Lys Met Gln Tyr Asn Ile Lys Glu  
900 905 910

Asp Phe Leu Ile Phe  
915

<210> 269

<211> 1455

<212> DNA

<213> *Arabidopsis thaliana*

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aggcacaaga gagttccagt ttttgtgatg atgccgattg atacatttgg aattgatgct    180
tctgggtgtc caaagattaa aaggctcaag gctttaactg tatctcttaa ggcactcaag    240
ttagctgggt ttcatggaat cgcagttagg gtttgggtgg ggattgtaga gcgtttctct    300
cctcttgagt ttaaatgggt actgtatgaa gagcttttta gactgatttc tgaggcaggg    360
ttgaagttac atgttgctct ttgctttcat tcaaatatgc atttgtttgg tgggaaagga    420
ggcatcagtc ttccactctg gatccgagag attggagacg tcaataagga catatactat    480
agagataaaa gcggattttc caacaatgac tatctcacac ttggagtcga tcaacttctc    540
ttgttcgggt gccgactctg tgttcaatgc tatgaagatt ttatgctcag ttttcaaca    600
aaatttgagc catatcttgg gaatgtgatt gaagaaataa gtataggctc tggctcttcg    660
ggggagctta gatatcctgc acatccttct ggagatggga ggtggaaatt tcctggaatt    720
ggtgaattcc aatgccatga caagtacatg atggaagact tgatggcagt ggcattccaa    780
gaaggcaaac ctcaatgggg aagcagagat cctccaata ccggctgcta taatagcttt    840
ccatctggag ttccgttctt tgaggagggc aatgatagct ttctctctga ctatggtcgt    900
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gcagccgatg tcttgcgagg acgtcaggaa gaagagaaaa gctctgtaat gctggttgca   1020
aaaattgggt gaatctattg gtggataaag acatcttcac accccgctga actaactgca   1080
ggttattaca acacctccct cagggatggt tatgatcctg tagcttccgt cttgtctcgt   1140
catggtgctg ctctcaacat cccctgcttg gatatggcag atagtgaat acctgagaaa   1200
tatctttgca gccctgaagg attacgtaga cagatacatg atgtttcgaa gaagtggaca   1260
atacatgtga ctggtgaaaa cacaagcgaa agatttgatg agatgggact aaggcaata   1320
cgagagaact gtgtgcaacc gaatggcgac actctaagat catttacgtt ttgcagaatg   1380
aatgagaaga tctttagggt cgagaactgg aacaactttg tccctttcat tagacagatg   1440
agtgacagata tgtaa                                     1455

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&lt;210&gt; 270

&lt;211&gt; 484

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 270

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Val Ala Gly Asn Ser Arg Ile Phe Ser Met Asp Ala Arg Glu Lys Ser  
20 25 30

Arg Ser Phe Val Leu Val Ser Ser Arg His Lys Arg Val Pro Val Phe  
35 40 45

Val Met Met Pro Ile Asp Thr Phe Gly Ile Asp Ala Ser Gly Cys Pro  
50 55 60

Lys Ile Lys Arg Leu Lys Ala Leu Thr Val Ser Leu Lys Ala Leu Lys  
65 70 75 80

Leu Ala Gly Val His Gly Ile Ala Val Glu Val Trp Trp Gly Ile Val  
85 90 95

Glu Arg Phe Ser Pro Leu Glu Phe Lys Trp Ser Leu Tyr Glu Glu Leu  
100 105 110

Phe Arg Leu Ile Ser Glu Ala Gly Leu Lys Leu His Val Ala Leu Cys  
115 120 125

Phe His Ser Asn Met His Leu Phe Gly Gly Lys Gly Gly Ile Ser Leu  
130 135 140

Pro Leu Trp Ile Arg Glu Ile Gly Asp Val Asn Lys Asp Ile Tyr Tyr  
145 150 155 160

Arg Asp Lys Ser Gly Phe Ser Asn Asn Asp Tyr Leu Thr Leu Gly Val  
165 170 175

Asp Gln Leu Pro Leu Phe Gly Gly Arg Thr Ala Val Gln Cys Tyr Glu  
180 185 190

Asp Phe Met Leu Ser Phe Ser Thr Lys Phe Glu Pro Tyr Leu Gly Asn  
195 200 205

Val Ile Glu Glu Ile Ser Ile Gly Leu Gly Pro Ser Gly Glu Leu Arg  
210 215 220

Tyr Pro Ala His Pro Ser Gly Asp Gly Arg Trp Lys Phe Pro Gly Ile  
225 230 235 240

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Gly Glu Phe Gln Cys His Asp Lys Tyr Met Met Glu Asp Leu Met Ala  
 245 250 255  
 Val Ala Ser Gln Glu Gly Lys Pro Gln Trp Gly Ser Arg Asp Pro Pro  
 260 265 270  
 Asn Thr Gly Cys Tyr Asn Ser Phe Pro Ser Gly Val Pro Phe Phe Glu  
 275 280 285  
 Glu Gly Asn Asp Ser Phe Leu Ser Asp Tyr Gly Arg Phe Phe Leu Glu  
 290 295 300  
 Trp Tyr Ser Gly Lys Leu Ile Cys His Ala Asp Ala Ile Leu Ala Lys  
 305 310 315 320  
 Ala Ala Asp Val Leu Arg Arg Arg Gln Glu Glu Lys Ser Ser Val  
 325 330 335  
 Met Leu Val Ala Lys Ile Gly Gly Ile Tyr Trp Trp Tyr Lys Thr Ser  
 340 345 350  
 Ser His Pro Ala Glu Leu Thr Ala Gly Tyr Tyr Asn Thr Ser Leu Arg  
 355 360 365  
 Asp Gly Tyr Asp Pro Val Ala Ser Val Leu Ser Arg His Gly Ala Ala  
 370 375 380  
 Leu Asn Ile Pro Cys Leu Asp Met Ala Asp Ser Glu Ile Pro Glu Lys  
 385 390 395 400  
 Tyr Leu Cys Ser Pro Glu Gly Leu Arg Arg Gln Ile His Asp Val Ser  
 405 410 415  
 Lys Lys Trp Thr Ile His Val Thr Gly Arg Asn Thr Ser Glu Arg Phe  
 420 425 430  
 Asp Glu Met Gly Leu Arg Gln Ile Arg Glu Asn Cys Val Gln Pro Asn  
 435 440 445  
 Gly Asp Thr Leu Arg Ser Phe Thr Phe Cys Arg Met Asn Glu Lys Ile  
 450 455 460  
 Phe Arg Val Glu Asn Trp Asn Asn Phe Val Pro Phe Ile Arg Gln Met  
 465 470 475 480  
 Ser Ala Asp Met

&lt;210&gt; 271

&lt;211&gt; 753

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 271

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gagtatgccc tagaagccgt ccgaaagggg aacgccgcgg tcggagtcgg cggcacagat      120
actgtcgtcc tcgccgtcga aaagaaatcc acccctaagc tccaggattc cagatcagca      180
aggaagatag tgagccttga taatcacatt gcattggcct gtgctggact gaaagcagat      240
gctcgtgtct tgataaaciaa ggcgaggata gagtgtcaaa gccacaggct tacgttggag      300
gaccaggtta ctgttgagta cattactcgg tacatagcag ggcttcaaca gaagtatact      360
caaatgggtg gtgtgagccc ttttggcttt tccactctta ttgttgggtt tgatccctac      420
actcgtatac ccgcgcttta tcagaccgat ccatctggta cattctctgc ttggaagact      480
aatgcaactg ggagaaactc taactcaatt agggagtctt tggagaaaaa ctacaaagaa      540
agcgctggcc aagaaactgt taagcttgct atccgtgctc tgcttgaggt tgttgagagt      600
gggggaaaga acattgaggt tgctgtaatg acacgagagg aaggtgttct gaagcaacta      660
gaagaagaag aaattgatat cattgtggct gagatcgaag cagagaaggc tgcagctgaa      720
gcagccaaga aaggccctcg gaaggaaaca tga                                     753

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&lt;210&gt; 272

&lt;211&gt; 250

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 272

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Met Ala Arg Tyr Asp Arg Ala Ile Thr Val Phe Ser Pro Asp Gly His
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Leu Phe Gln Val Glu Tyr Ala Leu Glu Ala Val Arg Lys Gly Asn Ala
          20          25          30
Ala Val Gly Val Arg Gly Thr Asp Thr Val Val Leu Ala Val Glu Lys
          35          40          45

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Lys Ser Thr Pro Lys Leu Gln Asp Ser Arg Ser Ala Arg Lys Ile Val  
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 Ser Leu Asp Asn His Ile Ala Leu Ala Cys Ala Gly Leu Lys Ala Asp  
 65 70 75 80  
 Ala Arg Val Leu Ile Asn Lys Ala Arg Ile Glu Cys Gln Ser His Arg  
 85 90 95  
 Leu Thr Leu Glu Asp Pro Val Thr Val Glu Tyr Ile Thr Arg Tyr Ile  
 100 105 110  
 Ala Gly Leu Gln Gln Lys Tyr Thr Gln Ser Gly Gly Val Arg Pro Phe  
 115 120 125  
 Gly Leu Ser Thr Leu Ile Val Gly Phe Asp Pro Tyr Thr Arg Ile Pro  
 130 135 140  
 Ala Leu Tyr Gln Thr Asp Pro Ser Gly Thr Phe Ser Ala Trp Lys Ala  
 145 150 155 160  
 Asn Ala Thr Gly Arg Asn Ser Asn Ser Ile Arg Glu Phe Leu Glu Lys  
 165 170 175  
 Asn Tyr Lys Glu Ser Ala Gly Gln Glu Thr Val Lys Leu Ala Ile Arg  
 180 185 190  
 Ala Leu Leu Glu Val Val Glu Ser Gly Gly Lys Asn Ile Glu Val Ala  
 195 200 205  
 Val Met Thr Arg Glu Glu Gly Val Leu Lys Gln Leu Glu Glu Glu Glu  
 210 215 220  
 Ile Asp Ile Ile Val Ala Glu Ile Glu Ala Glu Lys Ala Ala Ala Glu  
 225 230 235 240  
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<210> 273

<211> 438

<212> DNA

<213> Arabidopsis thaliana

<400> 273  
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 aacaactcac ttcgtaacca caagatcttg agatttaatg atggatccgt cgcgaactac 240  
 cgaatttatg agtttgaaat ctacaatttt aactctgatt catggaaggt ttttgacttc 300  
 actcccgact gggatatctc ttttactgac cttagcgtgt ctctcaaggg gtatacttac 360  
 tggctgatcc gttccaacgg gctgatccaa gaatattatg ctccaaggtc gagggaaaatg 420  
 atgatcaaga attattga 438

<210> 274

<211> 145

<212> PRT

<213> Arabidopsis thaliana

<400> 274

Met Leu Ser Tyr Gln Leu Ile Phe Phe Thr Ala Met Val Tyr Cys Tyr  
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Cys Tyr Thr Ser Pro Thr Met Thr Ser Ser Leu Arg Leu Arg Thr Leu  
 20 25 30

Ile Leu Gly Lys Gln Arg Trp Ile Lys Pro Arg Asn Phe Tyr Gln Phe  
 35 40 45

Cys Asp Lys Tyr Ala Ile Gly Tyr Glu Asn Lys Lys Asn Asn Ser Leu  
 50 55 60

Arg Asn His Lys Ile Leu Arg Phe Asn Asp Gly Ser Val Ala Asn Tyr  
 65 70 75 80

Arg Ile Tyr Glu Phe Glu Ile Tyr Asn Phe Asn Ser Asp Ser Trp Lys  
 85 90 95

Val Phe Asp Phe Thr Pro Asp Trp Asp Ile Ser Phe Thr Asp Leu Ser  
 100 105 110

Val Ser Leu Lys Gly Tyr Thr Tyr Trp Leu Ile Arg Ser Asn Gly Leu  
 115 120 125



Ile Gln Glu Tyr Tyr Ala Arg Ser Leu Arg Lys Met Met Ile Lys Asn  
 130 135 140

Tyr  
 145

<210> 275

<211> 1488

<212> DNA

<213> *Arabidopsis thaliana*

<400> 275

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gatgatgatg atgacgttgg caatcagaat gccgaagaac gtgagggtgga ggattatggt      180
gatacaaaa gtggggatat ggaagatgtt caggaggaaa tagctgaaga tgacgacaac      240
catattgata ttgagacagc agatgatgat gagaaaccac catctcctat tgatgatgaa      300
gatagggaaa agtattccca cttcttttca cttctcctc atggttctga agtttttatt      360
ggtgggctcc caagggatgt tggagaagag gacctgaggg atctatgtga agagataggc      420
gagatctttg aggtgagact gatgaaagat agggactctg gtgatagcaa aggctatgct      480
tttgtagctt tcaaaaccaa agacgttgca caaaaggcca ttgaggagtt gcacagtaaa      540
gagttaaagg gaaaaaccaa aaggtgctct ctttccgaaa cgaagaatag gttgttcatt      600
ggtaacatac caaagaactg gactgaggat gagtttagaa aagtcataga ggatgttggt      660
cctggagtgg agaacaatcg gtcataaaa gacccaacaa ataccactcg taacctggtg      720
tttgcatttg ttttgtacta taacaatgca tgtgctgatt attcaagaca gaaaatgata      780
gattctaatt ttaagcttga gggtaacgct ccaactgtga cttgggcaga cccaaaagc      840
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gtccttacg gtgctatggg tgccggtttg ggtattgccg gtagttttag tcagccaatg     1260
atctatggta gaggagcaat gccaacaggg atgcaaatgg ttccaatgct tcttcccgat     1320

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ggccgagttg gctatgttct gcaacagcct ggtatgccga tggcagcagc accaccacaa 1380  
 cgaccaagaa gaaatgaccg gaataacggc tcaagcggag ggtaggcagc agataacagt 1440  
 catgaacatg atggttaaccg aggagggccga aggtaccgac cctactag 1488

<210> 276

<211> 495

<212> PRT

<213> Arabidopsis thaliana

<400> 276

Met Ser Asp Ala Arg Asp Asn Asp Asp Arg Val Asp Phe Glu Glu Gly  
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Ser Tyr Ser Glu Met Glu Asp Glu Val Glu Glu Glu Gln Val Glu Glu  
 20 25 30

Tyr Glu Glu Glu Glu Glu Asp Asp Asp Asp Asp Val Gly Asn  
 35 40 45

Gln Asn Ala Glu Glu Arg Glu Val Glu Asp Tyr Gly Asp Thr Lys Gly  
 50 55 60

Gly Asp Met Glu Asp Val Gln Glu Glu Ile Ala Glu Asp Asp Asp Asn  
 65 70 75 80

His Ile Asp Ile Glu Thr Ala Asp Asp Asp Glu Lys Pro Pro Ser Pro  
 85 90 95

Ile Asp Asp Glu Asp Arg Glu Lys Tyr Ser His Leu Leu Ser Leu Pro  
 100 105 110

Pro His Gly Ser Glu Val Phe Ile Gly Gly Leu Pro Arg Asp Val Gly  
 115 120 125

Glu Glu Asp Leu Arg Asp Leu Cys Glu Glu Ile Gly Glu Ile Phe Glu  
 130 135 140

Val Arg Leu Met Lys Asp Arg Asp Ser Gly Asp Ser Lys Gly Tyr Ala  
 145 150 155 160

Phe Val Ala Phe Lys Thr Lys Asp Val Ala Gln Lys Ala Ile Glu Glu  
 165 170 175

Leu His Ser Lys Glu Phe Lys Gly Lys Thr Ile Arg Cys Ser Leu Ser  
 180 185 190

Glu Thr Lys Asn Arg Leu Phe Ile Gly Asn Ile Pro Lys Asn Trp Thr  
 195 200 205

Glu Asp Glu Phe Arg Lys Val Ile Glu Asp Val Gly Pro Gly Val Glu  
 210 215 220

Asn Ile Glu Leu Ile Lys Asp Pro Thr Asn Thr Thr Arg Asn Arg Gly  
 225 230 235 240

Phe Ala Phe Val Leu Tyr Tyr Asn Asn Ala Cys Ala Asp Tyr Ser Arg  
 245 250 255

Gln Lys Met Ile Asp Ser Asn Phe Lys Leu Glu Gly Asn Ala Pro Thr  
 260 265 270

Val Thr Trp Ala Asp Pro Lys Ser Ser Pro Glu His Ser Ala Ala Ala  
 275 280 285

Ala Gln Val Lys Ala Leu Tyr Val Lys Asn Ile Pro Glu Asn Thr Ser  
 290 295 300

Thr Glu Gln Leu Lys Glu Leu Phe Gln Arg His Gly Glu Val Thr Lys  
 305 310 315 320

Ile Val Thr Pro Pro Gly Lys Gly Gly Lys Arg Asp Phe Gly Phe Val  
 325 330 335

His Tyr Ala Glu Arg Ser Ser Ala Leu Lys Ala Val Lys Asp Thr Glu  
 340 345 350

Arg Tyr Glu Val Asn Gly Gln Pro Leu Glu Val Val Leu Ala Lys Pro  
 355 360 365

Gln Ala Glu Arg Lys His Asp Pro Ser Ser Tyr Ser Tyr Gly Ala Ala  
 370 375 380

Pro Thr Pro Ala Pro Phe Val His Pro Thr Phe Gly Gly Phe Ala Ala  
 385 390 395 400

Ala Pro Tyr Gly Ala Met Gly Ala Gly Leu Gly Ile Ala Gly Ser Phe  
 405 410 415

Ser Gln Pro Met Ile Tyr Gly Arg Gly Ala Met Pro Thr Gly Met Gln  
 420 425 430

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Met Val Pro Met Leu Leu Pro Asp Gly Arg Val Gly Tyr Val Leu Gln  
435 440 445

Gln Pro Gly Met Pro Met Ala Ala Ala Pro Pro Gln Arg Pro Arg Arg  
450 455 460

Asn Asp Arg Asn Asn Gly Ser Ser Gly Gly Ser Gly Arg Asp Asn Ser  
465 470 475 480

His Glu His Asp Gly Asn Arg Gly Gly Arg Arg Tyr Arg Pro Tyr  
485 490 495

<210> 277

<211> 1308

<212> DNA

<213> Arabidopsis thaliana

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gaacaagttc ctccatatga gcgtcctgca cttagcaagg gatatatcca cctcgaaaat 180  
aaagctacac ttccgaattt ctatgttgct gctggaattg ggggagagag acagttccct 240  
caatggtaca aagagaaaag tattgagctg attttgggca cagagattgt caaagcagat 300  
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aagaatatat tctacctgag agaactcgaa gatgctgatt accttgctta tgcaatggaa 480  
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aatccgctg aacaagccgt aaaggcaatc aaggcggctg aggaagggaa ctcaattccg 1020  
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 agtcctgaag agaacaatgc aattgctaaa ctgcacgag cacaaccttc tgttgagagc 1260  
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<210> 278

<211> 435

<212> PRT

<213> Arabidopsis thaliana

<400> 278

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Ala Ala Gly Tyr Ala Ala Arg Glu Phe Phe Asn Gln Gly Val Lys Pro  
 20 25 30

Gly Glu Leu Ala Ile Ile Ser Arg Glu Gln Val Pro Pro Tyr Glu Arg  
 35 40 45

Pro Ala Leu Ser Lys Gly Tyr Ile His Leu Glu Asn Lys Ala Thr Leu  
 50 55 60

Pro Asn Phe Tyr Val Ala Ala Gly Ile Gly Gly Glu Arg Gln Phe Pro  
 65 70 75 80

Gln Trp Tyr Lys Glu Lys Gly Ile Glu Leu Ile Leu Gly Thr Glu Ile  
 85 90 95

Val Lys Ala Asp Leu Ala Ala Lys Thr Leu Val Ser Gly Thr Gly Gln  
 100 105 110

Val Phe Lys Tyr Gln Thr Leu Leu Ala Ala Thr Gly Ser Ser Val Ile  
 115 120 125

Arg Leu Ser Asp Phe Gly Val Pro Gly Ala Asp Ala Lys Asn Ile Phe  
 130 135 140

Tyr Leu Arg Glu Leu Glu Asp Ala Asp Tyr Leu Ala Tyr Ala Met Glu  
 145 150 155 160

Thr Lys Glu Lys Gly Lys Ala Val Val Val Gly Gly Gly Tyr Ile Gly

Leu Glu Leu Gly Ala Ala Leu Lys Ala Asn Asn Leu Asp Val Thr Met  
180 185 190

Val Tyr Pro Glu Pro Trp Cys Met Pro Arg Leu Phe Thr Ala Gly Ile  
195 200 205

Ala Ser Phe Tyr Glu Gly Tyr Tyr Ala Asn Lys Gly Ile Asn Ile Val  
210 215 220

Lys Gly Thr Val Ala Ser Gly Phe Thr Thr Asn Ser Asn Gly Glu Val  
225 230 235 240

Thr Glu Val Lys Leu Lys Asp Gly Arg Thr Leu Glu Ala Asp Ile Val  
245 250 255

Ile Val Gly Val Gly Gly Arg Pro Ile Ile Ser Leu Phe Lys Asp Gln  
260 265 270

Val Glu Glu Glu Lys Gly Gly Leu Lys Thr Asp Gly Phe Phe Lys Thr  
275 280 285

Ser Leu Pro Asp Val Tyr Ala Ile Gly Asp Val Ala Thr Phe Pro Met  
290 295 300

Lys Leu Tyr Asn Glu Met Arg Arg Val Glu His Val Asp His Ala Arg  
305 310 315 320

Lys Ser Ala Glu Gln Ala Val Lys Ala Ile Lys Ala Ala Glu Glu Gly  
325 330 335

Asn Ser Ile Pro Glu Tyr Asp Tyr Leu Pro Tyr Phe Tyr Ser Arg Ala  
340 345 350

Phe Asp Leu Ser Trp Gln Phe Tyr Gly Asp Asn Val Gly Glu Ser Val  
355 360 365

Leu Phe Gly Asp Asn Asp Pro Glu Ser Pro Lys Pro Lys Phe Gly Ser  
370 375 380

Tyr Trp Ile Lys Glu Arg Lys Val Val Gly Ala Phe Leu Glu Gly Gly  
385 390 395 400

Ser Pro Glu Glu Asn Asn Ala Ile Ala Lys Leu Ala Arg Ala Gln Pro  
405 410 415

Ser Val Glu Ser Leu Glu Val Leu Ser Lys Glu Gly Leu Ser Phe Ala  
 420 425 430

Thr Asn Ile  
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<210> 279

<211> 1704

<212> DNA

<213> *Arabidopsis thaliana*

<400> 279

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ttgagaggtt atgtacttgc agctcggact agcaaagccg tcaatgctga tgatttcccg      360
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gagagttgtg aaacctctga gatgatactt gaggtggggt cttcgaagaa gtcgaacggc      600
tctagtcttc cttttagtgt atggagcacc cgaccttgcg agagagggat gctgtcacaa      660
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tacatgcctt catctgtaca atggttcttt aagaatggag ctttgttgta ccggtcaggg      900
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ttccgcataa gtaattcttc tggtagcctt tggcaaatgt tcttttctca gcatagtggt      1260
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<213> Arabidopsis thaliana

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Thr Asp Gln Pro Leu Arg Gly Tyr Val Leu Ala Ala Arg Thr Ser Lys  
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Ala Val Asn Ala Asp Asp Phe Pro Pro Leu Lys Lys Pro Val Ser Tyr  
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Ser Leu Val Trp Ser Ala Asp Ser Glu Lys Asn Gly Gly Gly Tyr Phe  
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Gly Ser Phe Phe Cys Cys Thr Tyr Asp Leu Ser Ser Glu Arg Thr Val  
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245 250 255

Pro Asn Leu Asp Gln Val His Ala Val Ile Glu His Phe Gly Pro Thr  
260 265 270

Val Tyr Phe His Pro Glu Glu Ala Tyr Met Pro Ser Ser Val Gln Trp  
275 280 285

Phe Phe Lys Asn Gly Ala Leu Leu Tyr Arg Ser Gly Lys Ser Glu Gly  
290 295 300

Gln Pro Ile Asn Ser Thr Gly Ser Asn Leu Pro Ala Gly Gly Cys Asn  
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Asp Met Asp Phe Trp Ile Asp Leu Pro Glu Asp Glu Glu Ala Lys Ser  
325 330 335

Asn Leu Lys Lys Gly Asn Leu Glu Ser Ser Glu Leu Tyr Val His Val  
340 345 350

Lys Pro Ala Leu Gly Gly Thr Phe Thr Asp Ile Val Met Trp Ile Phe  
355 360 365

Cys Pro Phe Asn Gly Pro Ala Thr Leu Lys Ile Gly Leu Phe Thr Leu  
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Pro Met Thr Arg Ile Gly Glu His Val Gly Asp Trp Glu His Phe Thr  
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Phe Arg Ile Cys Asn Phe Ser Gly Glu Leu Trp Gln Met Phe Ser  
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Gln His Ser Gly Gly Gly Trp Val Asp Ala Ser Asp Ile Glu Phe Val  
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Lys Asp Asn Lys Pro Ala Val Tyr Ser Ser Lys His Gly His Ala Ser  
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Phe Pro His Pro Gly Met Tyr Leu Gln Gly Ser Ser Lys Leu Gly Ile  
450 455 460

Gly Val Arg Asn Asp Val Ala Lys Ser Lys Tyr Ile Val Asp Ser Ser  
465 470 475 480

Gln Arg Tyr Val Ile Val Ala Ala Glu Tyr Leu Gly Lys Gly Ala Val  
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Ala Tyr Asp Ser Gly Ser Glu Ile Asn Lys Ile Met Asn Leu Leu Pro  
515 520 525

Leu Val Val Arg Phe Ser Ile Glu Asn Ile Val Asp Leu Phe Pro Ile  
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Gly Ser Phe Val Glu Ala Pro Glu Tyr Arg Asn Gly Lys Glu Cys Val  
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Ser Gln Ser Leu Asn Arg Glu Asn Phe Val Ser Ser Cys Asp Ala Ser  
Page 437

[illegible]

047-E2F-PCT.ST25.txt

Cys Arg Ser Leu His Lys Gly Pro Val Ser Leu Leu His Trp Ser Gly  
325 330 335

Lys Gly Lys Pro Trp Val Arg Leu Asp Glu Lys Arg Pro Cys Pro Leu  
340 345 350

Asp His Leu Trp Glu Pro Tyr Asp Leu Tyr Glu His Lys Ile Glu Arg  
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Page 439

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&lt;212&gt; PRT

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180 185 190Ser Ala Ala Ala Lys Asp Leu Cys Glu Ile Ala Thr Tyr Ser Ser Arg  
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Page 443

210

215

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Ser Gly Gln Ser Glu Ser Asp Asp Val Val Ser Ser Asp Leu Asn Leu  
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385 390 395 400

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Gln Val Glu Glu Arg Ser Ser Lys Asp Thr Leu Leu Ser Ala Ala Leu  
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Gln Thr Ser Pro Ser Val Asn His Glu Asn Gly Ile Gly Ser Gly His  
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Asp Thr Ser Ala Ala Glu Glu Phe Asn Ser Phe Glu Leu Ser Ala Lys  
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Page 447

1205

1210

1215

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Glu Gly Leu Ser Tyr Pro His Arg Ser His Tyr Thr Leu Glu Phe  
1235 1240 1245

Asp Glu Arg Asn Tyr Gln Asp Ser Tyr Glu Arg Met Arg Pro Glu  
1250 1255 1260

Pro Cys Glu Asn Arg Asp Asn Trp Arg Tyr His Pro Pro Ser Ser  
1265 1270 1275

His Gly Pro Arg Tyr His Asp Arg His Lys Gly Pro His Gln Ser  
1280 1285 1290

Ser Ser Tyr Ser Gly His His Arg Asp Ser Gly Arg Leu Gln Asn  
1295 1300 1305

Asn Arg Trp Ser Asp Ser Pro Arg Ala Tyr Asn Asn Arg His Ser  
1310 1315 1320

Tyr His Tyr Lys Gln His Ser Glu Gly Pro Val Pro Val Gly Met  
1325 1330 1335

Arg Asp Pro Gly Thr Trp His Gln Arg  
1340 1345

&lt;210&gt; 287

&lt;211&gt; 450

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 287

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&lt;210&gt; 288

&lt;211&gt; 149

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 288

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50 55 60Val Phe Gly Val Leu Ser Met Ala Ala Ala Leu Phe Ile Ala Val Pro  
65 70 75 80Ala Ile Val Val Ile Trp Ile Ser Val Val Val Thr Met Ala Phe Ala  
85 90 95Gly Lys Ser Arg Lys Arg Val Val Ile Glu Gly Arg Lys Val Thr Lys  
100 105 110Glu Ile Ala Gly Phe Val Phe Arg Val Leu Leu Lys Glu Gly Asn Phe  
115 120 125Val Ala Leu Leu Cys Ala Leu Leu Ala Tyr Phe Val Phe Phe Asn Ser  
130 135 140Tyr Ser Ser Ser Ser  
145

&lt;210&gt; 289

&lt;211&gt; 2190

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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047-E2F-PCT.ST25.txt

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gcagcgggtg cgagacttgt ttccggagac ggtggagatt tgaaaacaat ggggatgcaa 2040
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aggcaagaca aaggaaagat gccaatgagc gttacagtta aatcagttgt tttagcttta 2160
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<210> 290

<211> 729

<212> PRT

<213> Arabidopsis thaliana

<400> 290

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Arg Phe Phe Ser Ala Ser Val Phe Val Cys Ile Cys Leu Ile Trp Phe  
35 40 45

Tyr Arg Ile Gly Glu Ile Gly Asp Asn Arg Thr Val Leu Asp Arg Leu  
50 55 60

Ile Trp Phe Val Met Phe Ile Val Glu Ile Trp Phe Gly Leu Tyr Trp  
65 70 75 80

Val Val Thr Gln Ser Ser Arg Trp Asn Pro Val Trp Arg Phe Pro Phe  
85 90 95

Ser Asp Arg Leu Ser Arg Arg Tyr Gly Ser Asp Leu Pro Arg Leu Asp  
100 105 110

Val Phe Val Cys Thr Ala Asp Pro Val Ile Glu Pro Pro Leu Leu Val  
115 120 125

Val Asn Thr Val Leu Ser Val Thr Ala Leu Asp Tyr Pro Pro Glu Lys  
130 135 140

047-E2F-PCT.ST25.txt

Leu Ala Val Tyr Leu Ser Asp Asp Gly Gly Ser Glu Leu Thr Phe Tyr  
 145 150 155 160  
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 Lys Lys Phe Asn Val Glu Pro Thr Ser Pro Ala Ala Tyr Leu Ser Ser  
 180 185 190  
 Lys Ala Asn Cys Leu Asp Ser Ala Ala Glu Glu Val Ala Lys Leu Tyr  
 195 200 205  
 Arg Glu Met Ala Ala Arg Ile Glu Thr Ala Ala Arg Leu Gly Arg Ile  
 210 215 220  
 Pro Glu Glu Ala Arg Val Lys Tyr Gly Asp Gly Phe Ser Gln Trp Asp  
 225 230 235 240  
 Ala Asp Ala Thr Arg Arg Asn His Gly Thr Ile Leu Gln Val Leu Val  
 245 250 255  
 Asp Gly Arg Glu Gly Asn Thr Ile Ala Ile Pro Thr Leu Val Tyr Leu  
 260 265 270  
 Ser Arg Glu Lys Arg Pro Gln His His His Asn Phe Lys Ala Gly Ala  
 275 280 285  
 Met Asn Ala Leu Leu Arg Val Ser Ser Lys Ile Thr Cys Gly Lys Ile  
 290 295 300  
 Ile Leu Asn Leu Asp Cys Asp Met Tyr Ala Asn Asn Ser Lys Ser Thr  
 305 310 315 320  
 Arg Asp Ala Leu Cys Ile Leu Leu Asp Glu Lys Glu Gly Lys Glu Ile  
 325 330 335  
 Ala Phe Val Gln Phe Pro Gln Cys Phe Asp Asn Val Thr Arg Asn Asp  
 340 345 350  
 Leu Tyr Gly Ser Met Met Arg Val Gly Ile Asp Val Glu Phe Leu Gly  
 355 360 365  
 Leu Asp Gly Asn Gly Gly Pro Leu Tyr Ile Gly Thr Gly Cys Phe His  
 370 375 380  
 Arg Arg Asp Val Ile Cys Gly Arg Lys Tyr Gly Glu Glu Glu Glu Glu  
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047-E2F-PCT.ST25.txt

Glu Glu Ser Glu Arg Ile His Glu Asn Leu Glu Pro Glu Met Ile Lys  
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 420 425 430  
 Met Gly Val Lys Tyr Gly Cys Pro Val Glu Asp Val Ile Thr Gly Leu  
 435 440 445  
 Thr Ile Gln Cys Arg Gly Trp Lys Ser Ala Tyr Leu Asn Pro Glu Lys  
 450 455 460  
 Gln Ala Phe Leu Gly Val Ala Pro Thr Asn Leu His Gln Met Leu Val  
 465 470 475 480  
 Gln Gln Arg Arg Trp Ser Glu Gly Asp Phe Gln Ile Met Leu Ser Lys  
 485 490 495  
 Tyr Ser Pro Val Trp Tyr Gly Lys Gly Lys Ile Ser Leu Gly Leu Ile  
 500 505 510  
 Leu Gly Tyr Cys Cys Tyr Cys Leu Trp Ala Pro Ser Ser Leu Pro Val  
 515 520 525  
 Leu Ile Tyr Ser Val Leu Thr Ser Leu Cys Leu Phe Lys Gly Ile Pro  
 530 535 540  
 Leu Phe Pro Lys Val Ser Ser Ser Trp Phe Ile Pro Phe Gly Tyr Val  
 545 550 555 560  
 Thr Val Ala Ala Thr Ala Tyr Ser Leu Ala Glu Phe Leu Trp Cys Gly  
 565 570 575  
 Gly Thr Phe Arg Gly Trp Trp Asn Glu Gln Arg Met Trp Leu Tyr Arg  
 580 585 590  
 Arg Thr Ser Ser Phe Leu Phe Gly Phe Met Asp Thr Ile Lys Lys Leu  
 595 600 605  
 Leu Gly Val Ser Glu Ser Ala Phe Val Ile Thr Ala Lys Val Ala Glu  
 610 615 620  
 Glu Glu Ala Ala Glu Arg Tyr Lys Glu Glu Val Met Glu Phe Gly Val  
 625 630 635 640  
 Glu Ser Pro Met Phe Leu Val Leu Gly Thr Leu Gly Met Leu Asn Leu  
 Page 453

645

650

655

Phe Cys Phe Ala Ala Ala Val Ala Arg Leu Val Ser Gly Asp Gly Gly  
660 665 670

Asp Leu Lys Thr Met Gly Met Gln Phe Val Ile Thr Gly Val Leu Val  
675 680 685

Val Ile Asn Trp Pro Leu Tyr Lys Gly Met Leu Leu Arg Gln Asp Lys  
690 695 700

Gly Lys Met Pro Met Ser Val Thr Val Lys Ser Val Val Leu Ala Leu  
705 710 715 720

Ser Ala Cys Thr Cys Leu Ala Phe Leu  
725

&lt;210&gt; 291

&lt;211&gt; 1362

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 291

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tctcgggaga gtgaaactaa tgagcccgtc gaaatgcttg ttgaagatag tcttcagttc	240
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&lt;210&gt; 292

&lt;211&gt; 453

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 292

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Met Pro Tyr Ile Glu Met Lys Ser Lys Ile Ser Lys Val Leu Gly Val
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Cys Lys Lys His Lys Ala Ser Thr Arg Asn Ser Cys Ser Leu Ser Lys
20 25 30

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Ile Ser Gly Asp Leu Glu Ser Ile Thr Ala Ala Ile Thr Thr Cys His
35 40 45

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Asp Asp Glu Lys Gln His Pro Gly Leu Asp Thr Phe Ser Arg Glu Ser
50 55 60

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Glu Thr Asn Glu Pro Ala Glu Met Leu Val Glu Asp Thr Ser Gln Ser
65 70 75 80

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Gln Gly Phe Ala Pro Trp Val Asp Gly Ser Gln Ser Val Glu Asn Met
85 90 95

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Glu Asn Ala Cys Asn His Met Ser Asn Ser Asp Thr Ile Phe Ser Pro
100 105 110

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```

Val Leu Asn Asp Glu Leu Asp Gly Thr Gly Arg Val Phe Thr Ala Gly
115 120 125

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Asn Ser Val Ile Trp Glu Thr Pro Arg Trp Gly Ala Asp Glu Ser Ser
Page 455

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130

135

140

Asn Lys Ile Cys Phe Asp Asn Gln Thr Cys Asn Val Ser Asp Phe Tyr  
 145 150 155 160

Ile Ser Asp Val Leu Ile Ala Ser Leu Pro Phe Asp Glu Ser Gly Asn  
 165 170 175

Asn Asp Ala Phe Thr Glu Ile Ser Pro Leu Pro His Tyr Ile Phe Pro  
 180 185 190

Glu Gln Tyr Met Val Leu Pro Tyr Leu Glu Asp Gly Ser Ala Asn Lys  
 195 200 205

Asp Asp Ile Lys Ser Asp Thr Asp Lys Ile Asn Leu Asp Asn His Asp  
 210 215 220

Leu Phe Leu Ala Phe Asn Arg Thr Arg Ser Tyr Asn Val Glu Pro Asp  
 225 230 235 240

Asp Arg Ala Glu Ser Glu Val Ala Glu Asp Phe Asp Pro Gln Leu Phe  
 245 250 255

Ile Lys Asn Gln Pro Glu Leu Ser Asp Val Val Ser Asn Tyr Trp Pro  
 260 265 270

Arg Asp Thr Leu Arg Lys Lys Ser Val Thr Leu Val Leu Asp Leu Asp  
 275 280 285

Glu Thr Leu Val His Ser Thr Leu Glu Ser Cys Asn Val Ala Asp Phe  
 290 295 300

Ser Phe Arg Val Phe Phe Asn Met Gln Glu Asn Thr Val Tyr Val Arg  
 305 310 315 320

Gln Arg Pro His Leu Tyr Arg Phe Leu Glu Arg Val Gly Glu Leu Phe  
 325 330 335

His Val Val Ile Phe Thr Ala Ser His Ser Ile Tyr Ala Ser Gln Leu  
 340 345 350

Leu Asp Ile Leu Asp Pro Asp Gly Lys Phe Ile Ser Gln Arg Phe Tyr  
 355 360 365

Arg Asp Ser Cys Ile Leu Leu Asp Gly Ile Tyr Thr Lys Asp Leu Thr  
 370 375 380

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Val Leu Gly Leu Asp Leu Ala Lys Val Ala Ile Ile Asp Asn Cys Pro  
385 390 395 400

Gln Val Tyr Arg Leu Gln Ile Asn Asn Gly Ile Pro Ile Lys Ser Trp  
405 410 415

Tyr Asp Asp Pro Thr Asp Asp Gly Leu Ile Thr Ile Leu Pro Phe Leu  
420 425 430

Glu Thr Leu Ala Val Ala Asp Asp Val Arg Pro Ile Ile Gly Arg Arg  
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Phe Gly Asn Lys Glu  
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<211> 2769

<212> DNA

<213> Arabidopsis thaliana

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atcagctag						2769



&lt;210&gt; 294

&lt;211&gt; 922

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 294

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20 25 30Phe His Ser Gly Glu Arg Ser Ser Gly Gly Gly Gly Lys Leu Cys Ser  
35 40 45Leu Ser Leu Leu Ser Gly Ser Gly Ala Gly Lys Phe Ser Val Arg Ala  
50 55 60Leu Val Arg Pro Asp Asp Thr Asp Asp Ala Asp Ser Val Gly Asp Gly  
65 70 75 80Ser Leu Ala Phe Pro Asn His Val Ser Val Lys Ile Pro Phe Gly Asn  
85 90 95Arg Glu Ile Leu Val Glu Thr Gly Leu Met Gly Arg Gln Ala Ser Ser  
100 105 110Ala Val Thr Val Thr Asp Gly Glu Thr Ile Val Tyr Thr Ser Val Cys  
115 120 125Leu Ala Asp Val Pro Ser Glu Pro Ser Asp Phe Leu Pro Leu Tyr Val  
130 135 140His Tyr Gln Glu Arg Phe Ser Ala Val Gly Arg Thr Ser Gly Gly Phe  
145 150 155 160Phe Lys Arg Glu Gly Arg Thr Lys Asp His Glu Val Leu Ile Cys Arg  
165 170 175Leu Ile Asp Arg Pro Leu Arg Pro Thr Met Pro Lys Gly Phe Tyr Asn  
180 185 190Glu Thr Gln Ile Leu Ser Trp Val Leu Ser Tyr Asp Gly Leu His Ala  
195 200 205

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Pro Asp Ala Leu Ala Val Thr Ser Ala Gly Ile Ala Val Ala Leu Ser  
 210 215 220

Glu Val Pro Asn Ala Lys Ala Ile Ala Gly Val Arg Val Gly Leu Ile  
 225 230 235 240

Gly Gly Glu Phe Ile Val Asn Pro Thr Val Lys Glu Met Glu Glu Ser  
 245 250 255

Gln Leu Asp Leu Phe Leu Ala Gly Thr Asp Thr Ala Ile Leu Thr Ile  
 260 265 270

Glu Gly Tyr Ser Asn Phe Leu Pro Glu Glu Met Leu Leu Gln Ala Val  
 275 280 285

Lys Val Gly Gln Asp Ala Val Gln Ala Thr Cys Ile Ala Ile Glu Val  
 290 295 300

Leu Ala Lys Lys Tyr Gly Lys Pro Lys Met Leu Asp Ala Ile Arg Leu  
 305 310 315 320

Pro Pro Pro Glu Leu Tyr Lys His Val Lys Glu Leu Ala Gly Glu Glu  
 325 330 335

Leu Thr Lys Ala Leu Gln Ile Lys Ser Lys Ile Ser Arg Arg Lys Ala  
 340 345 350

Ile Ser Ser Leu Glu Glu Lys Val Leu Thr Ile Leu Thr Glu Lys Gly  
 355 360 365

Tyr Val Ile Asp Glu Val Ala Phe Gly Thr Ile Glu Ala Gln Pro Asp  
 370 375 380

Leu Leu Glu Asp Glu Asp Glu Asp Glu Glu Val Val Pro Glu Gly Glu  
 385 390 395 400

Val Asp Gln Gly Asp Val His Ile Arg Pro Ile Pro Arg Lys Pro Ile  
 405 410 415

Pro Leu Leu Phe Ser Glu Val Asp Val Lys Leu Val Phe Lys Glu Val  
 420 425 430

Ser Ser Lys Leu Leu Arg Arg Arg Ile Val Glu Gly Gly Lys Arg Ser  
 435 440 445

Asp Gly Arg Thr Leu Asp Glu Ile Arg Pro Ile Asn Ser Arg Cys Gly  
 450 455 460

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Leu Leu Pro Arg Ala His Gly Ser Thr Leu Phe Thr Arg Gly Glu Thr  
 465 470 475 480  
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 485 490 495  
 Ile Asp Asn Leu Glu Gly Ser Asp Glu Tyr Lys Arg Phe Tyr Leu Gln  
 500 505 510  
 Tyr Thr Phe Pro Pro Ser Ser Val Gly Glu Val Gly Arg Ile Gly Ala  
 515 520 525  
 Pro Ser Arg Arg Glu Ile Gly His Gly Thr Leu Ala Glu Arg Ala Leu  
 530 535 540  
 Glu Thr Ile Leu Pro Ser Asp Asp Asp Phe Pro Tyr Thr Ile Arg Val  
 545 550 555 560  
 Glu Ser Thr Val Ile Glu Ser Asn Gly Ser Ser Ser Met Ala Ser Val  
 565 570 575  
 Cys Gly Gly Cys Leu Ala Leu Gln Asp Ala Gly Val Pro Val Lys Cys  
 580 585 590  
 Ser Val Ala Gly Ile Ala Met Gly Met Val Trp Asp Thr Glu Glu Phe  
 595 600 605  
 Gly Gly Asp Gly Ser Pro Leu Ile Leu Ser Asp Ile Thr Gly Ala Glu  
 610 615 620  
 Asp Ala Ser Gly Asp Met Asp Phe Lys Val Ala Gly Asn Glu Asp Gly  
 625 630 635 640  
 Val Thr Ala Phe Gln Met Asp Ile Lys Val Gly Gly Ile Thr Leu Glu  
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 660 665 670  
 Leu Ala Glu Met Ala Lys Cys Ser Pro Pro Pro Thr Leu Ser Leu Ser  
 675 680 685  
 Lys Tyr Ala Pro Leu Ile Leu Ile Met Lys Val His Pro Ser Lys Val  
 690 695 700  
 Tyr Ser Leu Ile Gly Ser Gly Gly Lys Lys Val Lys Ser Ile Ile Glu

705 710 720

Glu Ser Gly Val Glu Ala Ile Asp Met Gln Asp Asp Gly Thr Val Lys  
725 730 735

Ile Met Ala Ile Asp Val Ala Ser Leu Glu Arg Ala Lys Ala Ile Ile  
740 745 750

Ser Gly Leu Thr Met Val Pro Ser Val Gly Asp Ile Tyr Arg Asn Cys  
755 760 765

Glu Ile Lys Ser Met Ala Pro Tyr Gly Ala Phe Val Glu Ile Ala Pro  
770 775 780

Gly Arg Glu Gly Leu Cys His Ile Ser Glu Leu Ser Ala Glu Trp Leu  
785 790 795 800

Ala Lys Pro Glu Asp Ala Tyr Lys Val Gly Asp Arg Ile Asp Val Lys  
805 810 815

Leu Ile Glu Val Asn Glu Lys Gly Gln Leu Arg Leu Ser Val Arg Ala  
820 825 830

Leu Leu Pro Glu Ser Glu Thr Asp Lys Asp Ser Gln Lys Gln Gln Pro  
835 840 845

Ala Gly Asp Ser Thr Lys Asp Lys Ser Ser Gln Arg Lys Tyr Val Asn  
850 855 860

Thr Ser Ser Lys Asp Arg Ala Ala Ala Gly Ala Ser Lys Val Ser Ser  
865 870 875 880

Gly Asp Glu Leu Val Leu Lys Lys Lys Asp Val Arg Arg Ala Thr Gly  
885 890 895

Gly Ser Ser Asp Lys Thr Met Asn Ser Asn Ser Ser Thr Asn Glu Glu  
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Ser Leu Val Asn Gly Glu Ala Thr Ile Ser  
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<211> 762

<212> DNA

<213> Arabidopsis thaliana

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 cgtcagccga caacaacatt gaggtttattc ccttgtagaag cttctaacat ggattccatg 240  
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 tcctctcttc caaaggaaga tgttttgaaa atgacacaga ctaccagatc tgtgaaacca 360  
 gagtctcaaa ctgcaccatt gactatattc tacgccgggc aagtgtattgt attcaatgac 420  
 ttttctgctg agaagaccaaa agaagtgtac aactggcga gcaaaggcac cgctaataagc 480  
 ttagccaaga atcaaaccga tatcagaagc aacatcgcta ctatcgcaaa ccaagtctct 540  
 catccaagaa aaaccacaac acaagagcca atccaatcct cccaacacc attgacagaa 600  
 cttcctattg ctagaagagc ttcaattcac cggttcttgg agaagagaaa ggacagagtt 660  
 acgtcaaaag caccatacca attatgcgat ccagccaaag cgtcttcaaa ccctcaaacc 720  
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<210> 296

<211> 253

<212> PRF

<213> *Arabidopsis thaliana*

<400> 296

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 20 25 30

Tyr Leu Lys Glu Asn Gly Ser Phe Gly Asp Leu Ser Leu Gly Met Ala  
 35 40 45

Cys Lys Pro Asp Val Asn Gly Thr Leu Gly Asn Ser Arg Gln Pro Thr  
 50 55 60

Thr Thr Met Ser Leu Phe Pro Cys Glu Ala Ser Asn Met Asp Ser Met  
 65 70 75 80

Val Gln Asp Val Lys Pro Thr Asn Leu Phe Pro Arg Gln Pro Ser Phe  
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Ser Ser Ser Ser Ser Ser Leu Pro Lys Glu Asp Val Leu Lys Met Thr  
 100 105 110

Gln Thr Thr Arg Ser Val Lys Pro Glu Ser Gln Thr Ala Pro Leu Thr  
 115 120 125

Ile Phe Tyr Ala Gly Gln Val Ile Val Phe Asn Asp Phe Ser Ala Glu  
 130 135 140

Lys Ala Lys Glu Val Ile Asn Leu Ala Ser Lys Gly Thr Ala Asn Ser  
 145 150 155 160

Leu Ala Lys Asn Gln Thr Asp Ile Arg Ser Asn Ile Ala Thr Ile Ala  
 165 170 175

Asn Gln Val Pro His Pro Arg Lys Thr Thr Thr Gln Glu Pro Ile Gln  
 180 185 190

Ser Ser Pro Thr Pro Leu Thr Glu Leu Pro Ile Ala Arg Arg Ala Ser  
 195 200 205

Leu His Arg Phe Leu Glu Lys Arg Lys Asp Arg Val Thr Ser Lys Ala  
 210 215 220

Pro Tyr Gln Leu Cys Asp Pro Ala Lys Ala Ser Ser Asn Pro Gln Thr  
 225 230 235 240

Thr Gly Asn Met Ser Trp Leu Gly Leu Ala Ala Glu Ile  
 245 250

<210> 297

<211> 1773

<212> DNA

<213> Arabidopsis thaliana

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047-E2F-PCT.ST25.txt

tcacaggtgg	ctgagaacat	gtgtttcagt	tggaagattg	aagctgatga	ttacaaagat	360
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atggaggaat	tgcagaagct	tggggattta	agcattgatg	tcgaggcttt	aggggaaagc	540
tcaatgtcga	acagtataa	atgcaatata	aatggaagta	aggatgtaac	ttcgctctca	600
aactgcaatg	gcctaaagca	aagttctgcg	gatgatttga	tagtcaatgg	gaaagatgca	660
gaaccaaagg	tttgtgatgg	aaggctagtt	aataggaaca	tcagaaaggt	gaatgagaac	720
tattttggat	cttatagtgc	gtttggcatt	cacagggaga	tgctaagtga	taaggttaga	780
acagaagcat	accgagatgc	acttttgaag	aatcctactc	tcttgaatgg	ctctgtttga	840
atggatgttg	gttgtggaac	tgggatattg	agtctttttg	ctgctaaagc	tggggcttca	900
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aacgagcata	atggggtact	tgaagttgca	cactcaatgg	tagaagagct	agataaatcg	1020
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ttatatgagt	caatgctcag	ttctgtgctc	tatgcaagag	atcggtgggt	gaaacctgga	1140
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catgacgaca	ctactcgact	tcccattggt	gacgttatag	cggagcgtga	tttagtgaca	1320
cagcctaccc	ttcttcagac	atttgacctg	gctaccatga	aaccggatga	agtagatttc	1380
acagcaacgg	caacgctgga	gcccactgag	tcagaagcaa	aaactaggtt	gtgccatggg	1440
gttgtgttgt	ggtttgacac	aggtttcacc	agtaggttct	gtaaggaaaa	cccaaccgta	1500
ctatccacat	caccctacac	tcccccaaca	cactgggctc	agacaatctt	aacttttcaa	1560
gaaccaatct	cagtggcacc	ggcctcggtt	ctgtctggta	atgacagaag	agaagccatc	1620
ggaaccgaag	agtgtcccgc	ctcaagcatt	catctgcgtg	tgagtgttgc	acgagcacat	1680
gagcatcgca	gcatagacat	ctcgttagag	gctactgggc	tgagctcaaa	gggtcagaag	1740
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<210> 298

<211> 590

<212> PRT

<213> Arabidopsis thaliana

<400> 298

047-E2F-PCT.ST25.txt

Met Val Lys His Glu Ile Leu Asn Tyr Ser Glu Asp Glu Glu Asn  
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Tyr Ser Asp Glu Gly Asp Trp Gly Asp Trp Lys Ala Asp Asp Asn Gly  
20 25 30

Ile Glu Gly Gly Glu Glu Glu Glu Asp Asp Gly Asp Asp Ser Glu  
35 40 45

Ser Asp Phe Leu Cys Leu Phe Cys Asp Ser His Phe Val Ser Cys Asp  
50 55 60

Leu Leu Phe Glu His Cys Arg Leu Ser His Gly Phe Asp Phe His Gly  
65 70 75 80

Val Arg Lys Glu Leu Lys Leu Asp Phe Tyr Ser Ser Phe Lys Leu Ile  
85 90 95

Asn Tyr Ile Arg Ser Gln Val Ala Glu Asn Met Cys Phe Ser Trp Lys  
100 105 110

Ile Glu Ala Asp Asp Tyr Lys Asp Val Lys Phe Pro Trp Asp Glu Glu  
115 120 125

Lys Tyr Leu Lys Pro Phe Trp Gln Glu Asp Ser Leu Leu Tyr Ser Phe  
130 135 140

Ala Asp Asp Glu Glu Asp Glu Glu Val Thr Phe Asp Arg Glu Glu Val  
145 150 155 160

Met Glu Glu Leu Gln Lys Leu Gly Asp Leu Ser Ile Asp Val Glu Ala  
165 170 175

Leu Gly Glu Ser Ser Met Ser Asn Ser Asp Lys Cys Asn Ile Asn Gly  
180 185 190

Ser Lys Asp Val Thr Ser Leu Ser Asn Cys Asn Gly Leu Lys Gln Ser  
195 200 205

Ser Ala Asp Asp Leu Ile Val Asn Gly Lys Asp Ala Glu Pro Lys Val  
210 215 220

Cys Asp Gly Arg Leu Val Asn Arg Asn Ile Arg Lys Val Asn Glu Asn  
225 230 235 240

Tyr Phe Gly Ser Tyr Ser Ser Phe Gly Ile His Arg Glu Met Leu Ser  
245 250 255



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Asp Lys Val Arg Thr Glu Ala Tyr Arg Asp Ala Leu Leu Lys Asn Pro  
 260 265 270  
 Thr Leu Leu Asn Gly Ser Val Val Met Asp Val Gly Cys Gly Thr Gly  
 275 280 285  
 Ile Leu Ser Leu Phe Ala Ala Lys Ala Gly Ala Ser Arg Val Val Ala  
 290 295 300  
 Val Glu Ala Ser Glu Lys Met Ala Lys Asp Asn Lys Val Phe Asn Asp  
 305 310 315 320  
 Asn Glu His Asn Gly Val Leu Glu Val Ala His Ser Met Val Glu Glu  
 325 330 335  
 Leu Asp Lys Ser Ile Gln Ile Gln Pro His Ser Val Asp Val Leu Val  
 340 345 350  
 Ser Glu Trp Met Gly Tyr Cys Leu Leu Tyr Glu Ser Met Leu Ser Ser  
 355 360 365  
 Val Leu Tyr Ala Arg Asp Arg Trp Leu Lys Pro Gly Gly Ala Ile Leu  
 370 375 380  
 Pro Asp Thr Ala Thr Met Phe Val Ala Gly Phe Gly Lys Gly Ala Thr  
 385 390 395 400  
 Ser Leu Pro Phe Trp Glu Asp Val Tyr Gly Phe Asp Met Ser Ser Ile  
 405 410 415  
 Gly Lys Glu Ile His Asp Asp Thr Thr Arg Leu Pro Ile Val Asp Val  
 420 425 430  
 Ile Ala Glu Arg Asp Leu Val Thr Gln Pro Thr Leu Leu Gln Thr Phe  
 435 440 445  
 Asp Leu Ala Thr Met Lys Pro Asp Glu Val Asp Phe Thr Ala Thr Ala  
 450 455 460  
 Thr Leu Glu Pro Thr Glu Ser Glu Ala Lys Thr Arg Leu Cys His Gly  
 465 470 475 480  
 Val Val Leu Trp Phe Asp Thr Gly Phe Thr Ser Arg Phe Cys Lys Glu  
 485 490 495  
 Asn Pro Thr Val Leu Ser Thr Ser Pro Tyr Thr Pro Pro Thr His Trp  
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500

Ala Gln Thr Ile Leu Thr Phe Gln Glu Pro Ile Ser Val Ala Pro Ala  
515 520 525

Ser Val Leu Ser Gly Asn Asp Arg Arg Glu Ala Ile Gly Thr Glu Glu  
530 535 540

Cys Pro Ala Ser Ser Ile His Leu Arg Val Ser Val Ala Arg Ala His  
545 550 555 560

Glu His Arg Ser Ile Asp Ile Ser Leu Glu Ala Thr Gly Leu Ser Ser  
565 570 575

Lys Gly Gln Lys Arg His Trp Pro Val Gln Ile Phe Asn Leu  
580 585 590

<210> 299

<211> 1482

<212> DNA

<213> Arabidopsis thaliana

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gcgatggtgt ttatagaaga agatttgaag acaaacgacg ttcaaataga agttctcact 180  
ggaattctca acctttgtgc ccttgtcgga tcattgctcg ccggaagaac gtcggacata 240  
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atgggttggg gtcgaatta tccggttctc ctatccgcta gatgcaccgc tggactcgga 360  
gtcggttttg ctctgatggt tgctccggtt tactctgccg agatcgcaac tgcttcacat 420  
agaggactct tagcttctct tcctcacctt tgtatcagta tagggatttt actaggttat 480  
atcgtgaatt acttcttctc caagttacct atgcataatc gttggagact catgctcggg 540  
atagccgcgg ttccgtccct agtgctagcg ttccggatct tgaatgccc ggaatctcca 600  
cgggtgttga ttatgcaagg ccgtcttaag gaaggcaagg agatattgga attggtatct 660  
aattcccctg aagaagcaga actccgcttt caagacatca aagctgctgc ggggaatcgac 720  
ccgaatcgcg tagacgatgt tgtgaaaatg gagggtaaga agactcatgg tgaaggagtg 780  
tggaagagcg tcattctaag accaactcct gcagtgcgac gtgtcttttt aactgctctt 840  
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047-E2F-PCT.ST25.txt

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tacagtctg aggtttttccc gttgaagctt agggcacaag gagcgagtct cggcgtttgcg 1260
gtgaacagag taatgaacgc caccgtgtcg atgtcgtttt tgcgttgac tagtgcgata 1320
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agagacggtg ataaagtacg cggcgaaaac ggtgcagctt ag 1482

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<210> 300

<211> 493

<212> PRT

<213> Arabidopsis thaliana

<400> 300

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Met Ala Asp Gln Ile Ser Gly Glu Lys Pro Ala Gly Val Asn Arg Phe
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Ala Leu Gln Cys Ala Ile Val Ala Ser Ile Val Ser Ile Ile Phe Gly
          20          25          30

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Tyr Asp Thr Gly Val Met Ser Gly Ala Met Val Phe Ile Glu Glu Asp
          35          40          45

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Leu Lys Thr Asn Asp Val Gln Ile Glu Val Leu Thr Gly Ile Leu Asn
          50          55          60

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Leu Cys Ala Leu Val Gly Ser Leu Leu Ala Gly Arg Thr Ser Asp Ile
65          70          75          80

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Ile Gly Arg Arg Tyr Thr Ile Val Leu Ala Ser Ile Leu Phe Met Leu
          85          90          95

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Gly Ser Ile Leu Met Gly Trp Gly Pro Asn Tyr Pro Val Leu Leu Ser
          100          105          110

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Gly Arg Cys Thr Ala Gly Leu Gly Val Gly Phe Ala Leu Met Val Ala

115

120

125

Pro Val Tyr Ser Ala Glu Ile Ala Thr Ala Ser His Arg Gly Leu Leu  
 130 135 140  
 Ala Ser Leu Pro His Leu Cys Ile Ser Ile Gly Ile Leu Leu Gly Tyr  
 145 150 155 160  
 Ile Val Asn Tyr Phe Phe Ser Lys Leu Pro Met His Ile Gly Trp Arg  
 165 170 175  
 Leu Met Leu Gly Ile Ala Ala Val Pro Ser Leu Val Leu Ala Phe Gly  
 180 185 190  
 Ile Leu Lys Met Pro Glu Ser Pro Arg Trp Leu Ile Met Gln Gly Arg  
 195 200 205  
 Leu Lys Glu Gly Lys Glu Ile Leu Glu Leu Val Ser Asn Ser Pro Glu  
 210 215 220  
 Glu Ala Glu Leu Arg Phe Gln Asp Ile Lys Ala Ala Ala Gly Ile Asp  
 225 230 235 240  
 Pro Lys Cys Val Asp Asp Val Val Lys Met Glu Gly Lys Lys Thr His  
 245 250 255  
 Gly Glu Gly Val Trp Lys Glu Leu Ile Leu Arg Pro Thr Pro Ala Val  
 260 265 270  
 Arg Arg Val Leu Leu Thr Ala Leu Gly Ile His Phe Phe Gln His Ala  
 275 280 285  
 Ser Gly Ile Glu Ala Val Leu Leu Tyr Gly Pro Arg Ile Phe Lys Lys  
 290 295 300  
 Ala Gly Ile Thr Thr Lys Asp Lys Leu Phe Leu Val Thr Ile Gly Val  
 305 310 315 320  
 Gly Ile Met Lys Thr Thr Phe Ile Phe Thr Ala Thr Leu Leu Leu Asp  
 325 330 335  
 Lys Val Gly Arg Arg Lys Leu Leu Leu Thr Ser Val Gly Gly Met Val  
 340 345 350  
 Ile Ala Leu Thr Met Leu Gly Phe Gly Leu Thr Met Ala Gln Asn Ala  
 355 360 365

047-E2F-PCT.ST25.txt

Gly Gly Lys Leu Ala Trp Ala Leu Val Leu Ser Ile Val Ala Ala Tyr  
370 375 380

Ser Phe Val Ala Phe Phe Ser Ile Gly Leu Gly Pro Ile Thr Trp Val  
385 390 395 400

Tyr Ser Ser Glu Val Phe Pro Leu Lys Leu Arg Ala Gln Gly Ala Ser  
405 410 415

Leu Gly Val Ala Val Asn Arg Val Met Asn Ala Thr Val Ser Met Ser  
420 425 430

Phe Leu Ser Leu Thr Ser Ala Ile Thr Thr Gly Gly Ala Phe Phe Met  
435 440 445

Phe Ala Gly Val Ala Ala Val Ala Trp Asn Phe Phe Phe Phe Leu Leu  
450 455 460

Pro Glu Thr Lys Gly Lys Ser Leu Glu Glu Ile Glu Ala Leu Phe Gln  
465 470 475 480

Arg Asp Gly Asp Lys Val Arg Gly Glu Asn Gly Ala Ala  
485 490

<210> 301

<211> 1311

<212> DNA

<213> Arabidopsis thaliana

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acaccgcaag agagcagcaa agtatccacc aaagatatat tcttgctcct gttaccaaac 180  
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tctgtcatgg gggaaatctac attttgggag atttcaaggg attgtttcag tgatttttct 360  
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<211> 436

<212> PR1

<213> *Arabidopsis thaliana*

<400> 302

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20 25 30

Glu Ile Leu Arg Arg Thr Gln Tyr Thr Pro Gln Glu Ser Ser Lys Val  
35 40 45

Ser Thr Lys Asp Ile Leu Leu Ser Leu Leu Pro Asn Thr Ser Ser Ser  
50 55 60

Arg Leu Ala Asn Glu Glu Ser Ile Lys Ser Leu Ala Leu Ala Cys Ala  
65 70 75 80

Leu Leu Ala Ser Ser Arg Ser Ser Thr His Glu Leu Leu Ser Trp Ile  
85 90 95

Pro Glu Asn Leu Ser Val Met Gly Glu Ser Thr Phe Trp Glu Ile Ser  
100 105 110

047-E2F-PCT.ST25.txt

Arg Asp Cys Phe Ser Asp Phe Ser Ser Asn Ser Asn Ala Glu Lys Leu  
115 120 125

Val Glu Leu Val Glu Asp Ser Glu Lys Ile Glu Met Leu Pro Ile Val  
130 135 140

Leu Pro Glu Leu Lys Asp Gly Ile Glu Lys Ser Ser Leu Gly Lys Gly  
145 150 155 160

Ser Asp Ala Glu Asp Val Ser Ala Ala Met Ala Arg Thr Pro Val Gly  
165 170 175

Tyr Ala Ile Leu Ala Ala His Gln Leu Arg Trp Phe Val Thr Gln Val  
180 185 190

Lys Lys Pro Asn Leu Val Lys Phe Cys Asn Leu Val Val Pro Cys Ala  
195 200 205

Leu Thr Ala Leu Asp His Trp Ser Pro Glu Val Lys Gly Gln Gly Met  
210 215 220

Ile Thr Phe Val His Leu Ala Lys Asn Val Ser Ser Gly Asp Leu Gly  
225 230 235 240

Leu Tyr Gly Asp Val Val Leu Asp Ala Cys Cys Gln Asn Ile Ala Ser  
245 250 255

Asp Asp Glu Ile Trp Ile His Val Val Glu Leu Ser Val Leu Leu Val  
260 265 270

Thr Lys Ile His Pro Asn Asn Pro Arg Ser Pro Trp Tyr Glu Lys Ile  
275 280 285

Met Asn Glu Met Leu Gly His Leu Glu Arg Gln Pro Arg Asn Lys Glu  
290 295 300

Arg Arg Ile Thr Trp Leu Arg Phe Val Glu Pro Leu Leu Asn Ser Leu  
305 310 315 320

Gly Leu Phe Leu Leu Ala His Phe Arg Arg Ile Phe Pro Leu Phe Phe  
325 330 335

Gln Trp Met His Ser Asp Asp Ala Glu Thr Val Leu Leu Val Leu Glu  
340 345 350

Arg Leu Glu Thr Val Val Arg Leu Thr Trp Ile Arg His Ser Pro Val  
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355 047-E2F-PCT.ST25.txt  
 360 365

Phe Pro Arg Leu Val Asp Glu Leu Val Ser Leu Tyr Lys Glu Ser Ser  
 370 375 380

Met Arg Lys Asp Arg Asp Asp Ile Arg Pro Leu Ile Leu Arg Ile Leu  
 385 390 395 400

Met Leu Leu Arg Gln Cys Lys Gly Leu Arg Phe Glu Ser Ala Trp Ser  
 405 410 415

Gln Tyr Gln Glu Asp Pro Asn Leu Ser Thr Val Ser Gln His Ile Trp  
 420 425 430

Thr Ser Ser Ser  
 435

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<211> 3369

<212> DNA

<213> Arabidopsis thaliana

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Tyr Ala Cys Glu Phe Leu Ala Gln Val Phe Ala Ile His Val Asn Lys  
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Gln Thr Leu Leu Cys Asp Met Leu Met Arg Asp Ala Pro Leu Gly Ile  
420 425 430

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Ala Arg Arg Met His Pro Arg Ser Ser Phe Lys Ala Phe Leu Glu Val  
545 550 555 560

Val Lys Thr Arg Ser Leu Pro Trp Lys Asp Tyr Glu Met Asp Ala Ile  
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Thr Asp Val Asn Thr Lys Val Ile Tyr Ser Lys Leu Asn Asp Leu Lys  
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 Ser Val Glu Ile Val Lys Arg Met Leu Glu Asn Ala Leu Glu Gly Thr  
 675 680 685  
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 740 745 750  
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 785 790 795 800  
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 Val Thr Gly Val Phe Cys Phe Leu Gln Leu Ala Ser His Glu Leu Gln  
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Gly Leu Gln Tyr Arg Asp Gly Glu Thr Ala Ala Tyr Ile Ala Ser Arg  
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Arg Lys His Asp Leu Val Ile Ala Ser Tyr Val Leu Gly Glu Ile Pro  
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Asp Asp Leu Leu Val Leu Val Glu Pro Gly Thr Pro His Gly Ala Asn  
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Lys Cys Pro Leu Glu Asn Thr Gly Lys Tyr Cys His Phe Val Gln Arg  
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Leu Gln Arg Thr Ser Ser Gln Arg Ser Tyr Lys Arg Thr Lys Gly Val  
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Pro Leu Arg Gly Phe Glu Asp Glu Lys Phe Cys Phe Val Ala Phe Arg  
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Arg Gly Gln Arg Pro Arg Glu Leu Trp Pro Leu Asp Gly Met Lys Leu  
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Lys Gln Gln Arg Val Leu Thr Thr Arg Trp Asn Asn Glu Arg Ile Lys  
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Phe Ala Glu Gln Thr Leu Ala Asp Ile Met Lys Glu Lys Gly Ala Thr  
Page 485

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 Lys Ile Gly Asp Thr Gly Leu Leu Asp His Ser Leu Lys His Met Asp  
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Val Thr Trp Lys Ala Lys Ala Glu Gln Gln Leu Met Glu Leu Ser Asn  
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Ala Val Leu Ala Leu Lys Gly Gln Asn Gln Pro Asn Trp Arg Tyr Pro  
 450 455 460

<210> 309

<211> 702

<212> DNA

<213> Arabidopsis thaliana

<400> 309

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aatatgtgtg cgatcgggaa gatttcgatg tcgatggagg atttgtcacc accgctcgcg	180
gcggtgaaga ttgaaaggat cggtggaagg aaacgcggtg gatctgttgt gtcgagggag	240
aagctagatg tgtggttgag agattcgggt gttgagatcg tgaagaatct tagagagtcg	300
ccgttattga tgcatttata cgcggaggct aatggtgtgt tgacgacgac ggcaacgaat	360
ccaaaggcgg aggattggac agagatggaa ggaagtggg gtagaggaga agagaggacg	420
ccggaaggag ttatatttgt ggagaagctc gcagacggtg acatagcaga tgatgatgat	480
cacgatggtg gcgcgtgtgg ggaagataca agcgcgtggg ggattgtggc gcaagggaaga	540
ggatcggata ctgggcccgt ttgttatcta ttgaaaacga cccgggtccg gtcgggtatg	600
ggtacggttt gcaccattt ctgtttgttt aaggtcaaga gttttaggga aacgcgtatg	660
tcacagttag ataattcgtg gttggtgcag actggtcaat ga	702

&lt;210&gt; 310

&lt;211&gt; 233

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 310

Met Ala Thr Ser Ala Arg Ile Cys Cys Gly Gly Gly Ser Ala Cys Ala  
 1 5 10 15

Val Arg Cys Asp Arg Arg Thr Leu Asn Leu Asn Ser Arg Ser Cys  
 20 25 30

Val Val Pro Val Thr Asn Arg Arg Asn Met Cys Ala Ile Gly Lys Ile  
 35 40 45

Ser Met Ser Met Glu Asp Leu Ser Pro Pro Ser Ala Ala Val Lys Ile  
 50 55 60

Glu Arg Ile Gly Gly Arg Lys Arg Gly Gly Ser Val Val Ser Arg Glu  
 65 70 75 80

Lys Leu Asp Val Trp Leu Arg Asp Ser Val Val Glu Ile Val Lys Asn  
 85 90 95

Leu Arg Glu Ser Pro Leu Leu Met His Leu Tyr Ala Glu Ala Asn Gly  
 100 105 110

Gly Leu Thr Thr Thr Ala Thr Asn Pro Lys Ala Glu Asp Trp Thr Glu  
 115 120 125

Met Glu Gly Lys Trp Gly Arg Gly Glu Glu Arg Thr Pro Glu Gly Val  
 130 135 140

Ile Leu Val Glu Lys Leu Ala Asp Gly Asp Ile Ala Asp Asp Asp Asp  
 145 150 155 160

His Asp Gly Gly Ala Cys Gly Glu Asp Thr Ser Ala Trp Gly Ile Val  
 165 170 175

Ala Gln Gly Arg Gly Ser Asp Thr Gly Pro Val Cys Tyr Leu Leu Lys  
 180 185 190

Thr Thr Arg Val Arg Ser Gly Met Gly Thr Val Cys Thr His Phe Cys  
 195 200 205

Leu Val Lys Val Lys Ser Phe Arg Glu Thr Ala Met Ser Gln Leu Asn  
 210 215 220

Asn Ser Trp Leu Val Gln Thr Gly Gln  
 225 230

<210> 311

<211> 1713

<212> DNA

<213> Arabidopsis thaliana

<400> 311  
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 gccctctgca caggtgaggc gggcgttggg aagtccactg ggaagcctct acatttcaaa 180  
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 ggtgacgtat ctgaccgtga agctaaggag acacgcaaaa aagaatctaa cgagaaaagg 660  
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047-E2F-PCT.ST25.txt

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<210> 312

<211> 570

<212> PRT

<213> Arabidopsis thaliana

<400> 312

Met Thr Lys Lys Lys Asn Pro Asn Val Phe Leu Asp Val Ser Ile Gly  
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Gly Asp Pro Val Gln Arg Ile Val Ile Glu Leu Phe Ala Asp Val Val  
20 25 30

Pro Lys Thr Ala Glu Asn Phe Arg Ala Leu Cys Thr Gly Glu Ala Gly  
35 40 45

Val Gly Lys Ser Thr Gly Lys Pro Leu His Phe Lys Gly Ser Ser Phe  
50 55 60

His Arg Val Ile Lys Gly Phe Met Ala Gln Gly Gly Asp Phe Ser Asn  
65 70 75 80

Gly Asn Gly Thr Gly Gly Glu Ser Ile Tyr Gly Gly Lys Phe Ser Asp  
85 90 95

Glu Asn Phe Arg Leu Asp His Asp Gly Ala Gly Val Leu Ser Met Ala  
100 105 110

Asn Cys Gly Pro Asn Thr Asn Gly Ser Gln Phe Phe Ile Leu Phe Lys  
115 120 125

Arg Gln Pro His Leu Asp Gly Lys His Val Val Phe Gly Lys Val Val  
130 135 140



047-E2F-PCT.ST25.txt

Glu Gly Met Ala Val Ile Lys Lys Met Glu Leu Val Gly Thr Ser Asp  
 145 150 155  
 Gly Lys Pro Thr Ser Pro Val Lys Ile Ile Asp Cys Gly Glu Thr Ser  
 165 170 175  
 Gln Ile Arg Ala His Asp Ala Ala Glu Arg Glu Lys Gly Lys Ser Lys  
 180 185 190  
 Lys Ser Asn Lys Asn Phe Ser Pro Gly Asp Val Ser Asp Arg Glu Ala  
 195 200 205  
 Lys Glu Thr Arg Lys Lys Glu Ser Asn Glu Lys Arg Ile Lys Arg Lys  
 210 215 220  
 Arg Arg Tyr Ser Ser Ser Asp Ser Tyr Ser Ser Ser Ser Asp Ser Asp  
 225 230 235 240  
 Ser Asp Ser Glu Ser Glu Ala Tyr Ser Ser Ser Ser Tyr Glu Ser Ser  
 245 250 255  
 Ser Ser Ser Asp Gly Lys His Arg Lys Arg Lys Ser Thr Thr Arg His  
 260 265 270  
 Lys Gly Arg Arg Gly Glu Arg Lys Ser Lys Gly Arg Ser Gly Lys Lys  
 275 280 285  
 Lys Ala Arg Pro Asp Arg Lys Pro Ser Thr Asn Ser Ser Ser Asp Thr  
 290 295 300  
 Glu Ser Ser Ser Ser Ser Asp Asp Glu Lys Val Gly His Lys Ala Ile  
 305 310 315 320  
 Lys Ser Val Lys Val Asp Asn Ala Asp Gln His Ala Asn Leu Asp Asp  
 325 330 335  
 Ser Val Lys Ser Arg Ser Arg Ser Pro Ile Arg Arg Arg Asn Gln Asn  
 340 345 350  
 Ser Arg Ser Lys Ser Pro Ser Arg Ser Pro Val Arg Val Leu Gly Asn  
 355 360 365  
 Gly Asn Arg Ser Pro Ser Arg Ser Pro Val Arg Asp Leu Gly Asn Gly  
 370 375 380  
 Ser Arg Ser Pro Arg Glu Lys Pro Thr Glu Glu Thr Val Gly Lys Ser  
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385 390 395 400

Phe Arg Ser Pro Ser Pro Ser Gly Val Pro Lys Arg Ile Arg Lys Gly  
405 410 415

Arg Gly Phe Thr Glu Arg Tyr Ser Phe Ala Arg Lys Tyr His Thr Pro  
420 425 430

Ser Pro Glu Arg Ser Pro Pro Arg His Trp Pro Asp Arg Arg Asn Phe  
435 440 445

Gln Asp Arg Asn Arg Asp Arg Tyr Pro Ser Asn Arg Ser Tyr Ser Glu  
450 455 460

Arg Ser Pro Arg Gly Arg Phe Arg Ser Pro Pro Arg Arg Arg Ser Pro  
465 470 475 480

Pro Arg Tyr Asn Arg Arg Arg Arg Ser Thr Ser Arg Ser Pro Asp Gly  
485 490 495

Tyr Arg Arg Arg Leu Arg Asp Gly Ser Arg Ser Gln Ser Pro Arg His  
500 505 510

Arg Ser Arg Ser Gln Ser Pro Arg Lys Arg Gln Pro Ile Ser Gln Asp  
515 520 525

Leu Lys Ser Arg Leu Gly Pro Gln Arg Ser Pro Ile Arg Gly Gly Arg  
530 535 540

Thr Ser Pro Ala Glu Ser Leu Ser Pro Ser His Ser Pro Ser Pro Pro  
545 550 555 560

Gly Lys Arg Gly Leu Val Ser Tyr Ala Asp  
565 570

<210> 313

<211> 918

<212> DNA

<213> Arabidopsis thaliana

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cagtacattc atggttttagc tgctaaagga gtccattata ttcacgccc gggaccgaca 180

047-E2F-PCT.ST25.txt

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ctgaaaacca aaaagatata caccgttttg atatggtgca gagttctagc attcttagtt	360
gcctgccagt tctccgtgt tataactttc tattcaactc agcttcctgg ccctaactat	420
cactgccgtg agggctctaa agtttctagg ttgccatggc ccaaaagcgc tcttgaggtt	480
ctcgagatta accctcatgg ggtgatgtat ggatgccggag acctgatttt ctcatcgcac	540
atgatattca ctctagtctt tgtccgtact taccagaaat atggcactaa aagggtcata	600
aagctgtttg ggtggctcac tgcaattgtg cagagcctct tgatcattgc ctctcgtaaa	660
cattacagtg tcgatgtagt tgttgcatgg tatactgtga atttggtggt gttctgtcta	720
gacaagaaat taccagaatt accagatcgg actgctgtgt tgctcccagt aatctcaaaa	780
gacagaacaa aagaagagaa ccacaagctg ttgaatggaa acggtgttga ccctgctgat	840
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acaatgaatg gcgcgtga	918

<210> 314

<211> 305

<212> PRT

<213> Arabidopsis thaliana

<400> 314

Met Thr Leu Tyr	Ile Arg Arg Glu Ser Ser Lys Leu Trp Lys Arg Phe
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Cys Ser Glu Ile Ser Thr Glu Ile Gly Leu Leu Ala Glu Asn Trp Lys
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Tyr Leu Leu Ala Gly Leu Ile Cys Gln Tyr Ile His Gly Leu Ala Ala
35 40 45

Lys Gly Val His Tyr Ile His Arg Pro Gly Pro Thr Leu Gln Asp Leu
50 55 60

Gly Phe Phe Leu Leu Pro Glu Leu Gly Gln Glu Arg Ser Tyr Ile Ser
65 70 75 80

Glu Thr Val Phe Thr Ser Val Phe Leu Ser Phe Phe Leu Trp Thr Phe
85 90 95

047-E2F-PCT.ST25.txt

His Pro Phe Ile Leu Lys Thr Lys Lys Ile Tyr Thr Val Leu Ile Trp  
100 105 110

Cys Arg Val Leu Ala Phe Leu Val Ala Cys Gln Phe Leu Arg Val Ile  
115 120 125

Thr Phe Tyr Ser Thr Gln Leu Pro Gly Pro Asn Tyr His Cys Arg Glu  
130 135 140

Gly Ser Lys Val Ser Arg Leu Pro Trp Pro Lys Ser Ala Leu Glu Val  
145 150 155 160

Leu Glu Ile Asn Pro His Gly Val Met Tyr Gly Cys Gly Asp Leu Ile  
165 170 175

Phe Ser Ser His Met Ile Phe Thr Leu Val Phe Val Arg Thr Tyr Gln  
180 185 190

Lys Tyr Gly Thr Lys Arg Phe Ile Lys Leu Phe Gly Trp Leu Thr Ala  
195 200 205

Ile Val Gln Ser Leu Leu Ile Ile Ala Ser Arg Lys His Tyr Ser Val  
210 215 220

Asp Val Val Val Ala Trp Tyr Thr Val Asn Leu Val Val Phe Cys Leu  
225 230 235 240

Asp Lys Lys Leu Pro Glu Leu Pro Asp Arg Thr Ala Val Leu Leu Pro  
245 250 255

Val Ile Ser Lys Asp Arg Thr Lys Glu Glu Asn His Lys Leu Leu Asn  
260 265 270

Gly Asn Gly Val Asp Pro Ala Asp Trp Arg Pro Arg Ala Gln Val Asn  
275 280 285

Gly Lys Ile Asp Ser Asn Gly Val His Thr Asp Asn Thr Met Asn Gly  
290 295 300

Ala  
305

<210> 315

<211> 996

<212> DNA

<213> *Arabidopsis thaliana*

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aaacatctcc gtttctctct cttttatcct tcttcttcca acacctctct tcctctctgc    180
gacatctgtc aggataaaaa agctctgttg ttctgtcaac aagatagagc tattttatgc    240
aaagattgcg attcatcgat ccacgctgcy aacgaacaca caaagaaaca cgataggttt    300
cttcttacag gggttaagct ctctgcaaca tcgtctgttt acaaacctac ttcgaaatct    360
tcttcttctt cttcaagcaa ccaagatttc tctgtccctg gatcatcaat ctctaactct    420
cctcctctca agaaacctct ctacgctcct cctcagagca acaagatcca accctttctg    480
aagatcaacg gcggtgatgc gtcggtgaat cagtggggat ccacaagcac gatttctgag    540
tatttgatgg atacgttacc tggttggcac gttgaggatt tcctcgattc ctctcttctt    600
acttatgggt tctctaagag tggatgatgat gatggagtggt taccatatat ggaaccagaa    660
gatgacaaca acactaagag aaacaacaac aacaacaaca acaacaacaa caatacagtg    720
tcacttccat ctaagaattt agggatttgg gtcctcaga ttccacaac tcttcttctt    780
tcatacccaa atcaatactt ttctcaagac aacaacatac agtttgggat gtacaacaaa    840
gaaacatcac cagaagtagt gtcctttgct ccaatacaaa acatgaaaca acaaggacag    900
aacaacaaga gatggtatga tgatggtggc ttactgtctc cacagatcac tcctctctct    960
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&lt;210&gt; 316

&lt;211&gt; 331

&lt;212&gt; PR1

<213> *Arabidopsis thaliana*

&lt;400&gt; 316

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Met Lys Ile Arg  Cys Asp Val  Cys Asp Lys  Glu Glu Ala Ser  Val Phe
1             5             10             15

Cys Thr Ala Asp  Glu Ala Ser Leu  Cys Gly Gly Cys Asp His  Gln Val
                20             25             30

His His Ala Asn Lys Leu Ala Ser  Lys His Leu Arg  Phe Ser Leu Leu
        35             40             45

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047-E2F-PCT.ST25.txt

Tyr Pro Ser Ser Ser Asn Thr Ser Ser Pro Leu Cys Asp Ile Cys Gln  
 50 55 60  
 Asp Lys Lys Ala Leu Leu Phe Cys Gln Gln Asp Arg Ala Ile Leu Cys  
 65 70 75 80  
 Lys Asp Cys Asp Ser Ser Ile His Ala Ala Asn Glu His Thr Lys Lys  
 85 90 95  
 His Asp Arg Phe Leu Leu Thr Gly Val Lys Leu Ser Ala Thr Ser Ser  
 100 105 110  
 Val Tyr Lys Pro Thr Ser Lys Ser Ser Ser Ser Ser Ser Asn Gln  
 115 120 125  
 Asp Phe Ser Val Pro Gly Ser Ser Ile Ser Asn Pro Pro Pro Leu Lys  
 130 135 140  
 Lys Pro Leu Ser Ala Pro Pro Gln Ser Asn Lys Ile Gln Pro Phe Ser  
 145 150 155 160  
 Lys Ile Asn Gly Gly Asp Ala Ser Val Asn Gln Trp Gly Ser Thr Ser  
 165 170 175  
 Thr Ile Ser Glu Tyr Leu Met Asp Thr Leu Pro Gly Trp His Val Glu  
 180 185 190  
 Asp Phe Leu Asp Ser Ser Leu Pro Thr Tyr Gly Phe Ser Lys Ser Gly  
 195 200 205  
 Asp Asp Asp Gly Val Leu Pro Tyr Met Glu Pro Glu Asp Asp Asn Asn  
 210 215 220  
 Thr Lys Arg Asn Asn Asn Asn Asn Asn Asn Asn Asn Asn Thr Val  
 225 230 235 240  
 Ser Leu Pro Ser Lys Asn Leu Gly Ile Trp Val Pro Gln Ile Pro Gln  
 245 250 255  
 Thr Leu Pro Ser Ser Tyr Pro Asn Gln Tyr Phe Ser Gln Asp Asn Asn  
 260 265 270  
 Ile Gln Phe Gly Met Tyr Asn Lys Glu Thr Ser Pro Glu Val Val Ser  
 275 280 285  
 Phe Ala Pro Ile Gln Asn Met Lys Gln Gln Gly Gln Asn Asn Lys Arg  
 290 295 300

Trp Tyr Asp Asp Gly Gly Phe Thr Val Pro Gln Ile Thr Pro Pro Pro  
 305 310 315 320

Leu Ser Ser Asn Lys Lys Phe Arg Ser Phe Trp  
 325 330

<210> 317

<211> 1236

<212> DNA

<213> Arabidopsis thaliana

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 cggccagaga acagcccaga aaaggcacag ttcattggaac aacagtttca gcaagaggtg 540  
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 aaccttctca tctcagcaga taagtcacatc aagattgcag attttggtgt tgcaagaatt 840  
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&lt;210&gt; 318

&lt;211&gt; 411

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 318

Met Leu Glu Gly Ala Lys Phe Asn Val Leu Ala Val Gly Asn His His  
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 20 25 30

Leu Asn Glu Gly Ser Asn Met Ser Met Glu Ser Met Gln Thr Ser Asn  
 35 40 45

Ala Gly Gly Ser Val Ser Met Ser Val Asp Asn Ser Ser Val Gly Ser  
 50 55 60

Ser Asp Ala Leu Ile Gly His Pro Gly Leu Lys Pro Val Arg His Tyr  
 65 70 75 80

Ser Leu Ser Val Gly Gln Ser Val Phe Arg Pro Gly Arg Val Thr His  
 85 90 95

Ala Leu Asn Asp Asp Ala Leu Ala Gln Ala Leu Met Asp Thr Arg Tyr  
 100 105 110

Pro Thr Glu Gly Leu Thr Asn Tyr Asp Glu Trp Thr Ile Asp Leu Arg  
 115 120 125

Lys Leu Asn Met Gly Pro Ala Phe Ala Gln Gly Ala Phe Gly Lys Leu  
 130 135 140

Tyr Lys Gly Thr Tyr Asn Gly Glu Asp Val Ala Ile Lys Ile Leu Glu  
 145 150 155 160

Arg Pro Glu Asn Ser Pro Glu Lys Ala Gln Phe Met Glu Gln Gln Phe  
 165 170 175

Gln Gln Glu Val Ser Met Leu Ala Asn Leu Lys His Pro Asn Ile Val  
 180 185 190

Arg Phe Ile Gly Ala Cys Arg Lys Pro Met Val Trp Cys Ile Val Thr  
 195 200 205



Glu Tyr Ala Lys Gly Gly Ser Val Arg Gln Phe Leu Thr Arg Arg Gln  
 210 215 220  
 Asn Arg Ala Val Pro Leu Lys Leu Ala Val Lys Gln Ala Leu Asp Val  
 225 230 235 240  
 Ala Arg Gly Met Ala Tyr Val His Gly Arg Asn Phe Ile His Arg Asp  
 245 250 255  
 Leu Lys Ser Asp Asn Leu Leu Ile Ser Ala Asp Lys Ser Ile Lys Ile  
 260 265 270  
 Ala Asp Phe Gly Val Ala Arg Ile Glu Val Gln Thr Glu Gly Met Thr  
 275 280 285  
 Pro Glu Thr Gly Thr Tyr Arg Trp Met Ala Pro Glu Met Ile Gln His  
 290 295 300  
 Arg Ala Tyr Asn Gln Lys Val Asp Val Tyr Ser Phe Gly Ile Val Leu  
 305 310 315 320  
 Trp Glu Leu Ile Thr Gly Leu Leu Pro Phe Gln Asn Met Thr Ala Val  
 325 330 335  
 Gln Ala Ala Phe Ala Val Val Asn Arg Gly Val Arg Pro Thr Val Pro  
 340 345 350  
 Asn Asp Cys Leu Pro Val Leu Ser Asp Ile Met Thr Arg Cys Trp Asp  
 355 360 365  
 Ala Asn Pro Glu Val Arg Pro Cys Phe Val Glu Val Val Lys Leu Leu  
 370 375 380  
 Glu Ala Ala Glu Thr Glu Ile Met Thr Thr Ala Arg Lys Ala Arg Phe  
 385 390 395 400  
 Arg Cys Cys Leu Ser Gln Pro Met Thr Ile Asp  
 405 410

&lt;210&gt; 319

&lt;211&gt; 1383

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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gcagaggaaa ggcggctaag ggctaaggag ctgggcgaga tggctaaagc cgctgtggaa 1320
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tag

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<210> 320

<211> 460

<212> PRT

<213> Arabidopsis thaliana

<400> 320

047-E2F-PCT.ST25.txt

Met Ala Lys Leu Phe Ala Arg Arg Gly Ala Lys Ser Thr Leu Leu Thr  
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Thr Pro Ile Asn Ala Lys Ile Leu Glu Lys Pro Ile Glu Ala Phe Lys  
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Val Gln Asn Pro Asp Leu Glu Ile Gly Ile Lys Ile Leu Asn Phe Pro  
35 40 45

Cys Val Glu Leu Gly Leu Pro Glu Gly Cys Glu Asn Arg Asp Phe Ile  
50 55 60

Asn Ser Tyr Gln Lys Ser Asp Ser Phe Asp Leu Phe Leu Lys Phe Leu  
65 70 75 80

Phe Ser Thr Lys Tyr Met Lys Gln Gln Leu Glu Ser Phe Ile Glu Thr  
85 90 95

Thr Lys Pro Ser Ala Leu Val Ala Asp Met Phe Phe Pro Trp Ala Thr  
100 105 110

Glu Ser Ala Glu Lys Ile Gly Val Pro Arg Leu Val Phe His Gly Thr  
115 120 125

Ser Ser Phe Ala Leu Cys Cys Ser Tyr Asn Met Arg Ile His Lys Pro  
130 135 140

His Lys Lys Val Ala Ser Ser Ser Thr Pro Phe Val Ile Pro Gly Leu  
145 150 155 160

Pro Gly Asp Ile Val Ile Thr Glu Asp Gln Ala Asn Val Thr Asn Glu  
165 170 175

Glu Thr Pro Phe Gly Lys Phe Trp Lys Glu Val Arg Glu Ser Glu Thr  
180 185 190

Ser Ser Phe Gly Val Leu Val Asn Ser Phe Tyr Glu Leu Glu Ser Ser  
195 200 205

Tyr Ala Asp Phe Tyr Arg Ser Phe Val Ala Lys Lys Ala Trp His Ile  
210 215 220

Gly Pro Leu Ser Leu Ser Asn Arg Gly Ile Ala Glu Lys Ala Gly Arg  
225 230 235 240

Gly Lys Lys Ala Asn Ile Asp Glu Gln Glu Cys Leu Lys Trp Leu Asp  
245 250 255

047-E2F-PCT.ST25.txt

Ser Lys Thr Pro Gly Ser Val Val Tyr Leu Ser Phe Gly Ser Gly Thr  
260 265 270

Gly Leu Pro Asn Glu Gln Leu Leu Glu Ile Ala Phe Gly Leu Glu Gly  
275 280 285

Ser Gly Gln Asn Phe Ile Trp Val Val Ser Lys Asn Glu Asn Gln Val  
290 295 300

Gly Thr Gly Glu Asn Glu Asp Trp Leu Pro Lys Gly Phe Glu Glu Arg  
305 310 315 320

Asn Lys Gly Lys Gly Leu Ile Ile Arg Gly Trp Ala Pro Gln Val Leu  
325 330 335

Ile Leu Asp His Lys Ala Ile Gly Gly Phe Val Thr His Cys Gly Trp  
340 345 350

Asn Ser Thr Leu Glu Gly Ile Ala Ala Gly Leu Pro Met Val Thr Trp  
355 360 365

Pro Met Gly Ala Glu Gln Phe Tyr Asn Glu Lys Leu Leu Thr Lys Val  
370 375 380

Leu Arg Ile Gly Val Asn Val Gly Ala Thr Glu Leu Val Lys Lys Gly  
385 390 395 400

Lys Leu Ile Ser Arg Ala Gln Val Glu Lys Ala Val Arg Glu Val Ile  
405 410 415

Gly Gly Glu Lys Ala Glu Glu Arg Arg Leu Arg Ala Lys Glu Leu Gly  
420 425 430

Glu Met Ala Lys Ala Ala Val Glu Glu Gly Gly Ser Ser Tyr Asn Asp  
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Val Asn Lys Phe Met Glu Glu Leu Asn Gly Arg Lys  
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<210> 321

<211> 2586

<212> DNA

<213> Arabidopsis thaliana

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gatggatatg gaattagtga tggcgattca gatgtcattt cattaccttg cctgagcgg 180  
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cagcaatatc ctatgcatgt agggaaaata gttcttattc agatttgtgaa cccagccaga 1140  
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gtatga 2586

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&lt;210&gt; 322

&lt;211&gt; 861

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 322

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Met Gly Ser Lys Ser Phe Gly Asn Leu Leu Asp Leu Ala Ser Gly Asp
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Leu Leu Asp Ile Pro Gln Thr Pro Arg Tyr Leu Pro Arg Val Met Thr
          20          25          30

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```

Val Pro Gly Ile Ile Ser Asp Val Asp Gly Tyr Gly Ile Ser Asp Gly
          35          40          45

```

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Asp Ser Asp Val Ile Ser Leu Pro Cys Arg Glu Arg Lys Ile Ile Val
          50          55          60

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Ala Asn Phe Leu Pro Leu Asn Gly Lys Lys Asp Ser Glu Thr Gly Lys
65          70          75          80

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Trp Lys Phe Ser Leu Asp Asn Asp Ser Pro Leu Leu His Leu Lys Asp
          85          90          95

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Gly Phe Ser Pro Glu Thr Glu Val Ile Tyr Val Gly Ser Leu Lys Thr  
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 His Val Asp Val Ser Glu Gln Asp Glu Val Ser His Asn Leu Phe Glu  
 115 120 125  
 Glu Phe Asn Cys Val Ala Thr Phe Leu Pro Gln Asp Val His Lys Lys  
 130 135 140  
 Phe Tyr Leu Gly Phe Cys Lys Gln Gln Leu Trp Pro Leu Phe His Tyr  
 145 150 155 160  
 Met Leu Pro Met Cys Pro Asp His Gly Glu Arg Phe Asp Arg Gly Leu  
 165 170 175  
 Trp Gln Ala Tyr Val Ser Ala Asn Lys Ile Phe Ala Asp Lys Val Met  
 180 185 190  
 Gly Val Ile Asn Leu Glu Glu Asp Tyr Ile Trp Ile His Asp Tyr His  
 195 200 205  
 Leu Met Val Leu Pro Thr Phe Leu Arg Arg Arg Phe His Arg Val Lys  
 210 215 220  
 Leu Gly Phe Phe Leu His Ser Pro Phe Pro Ser Ser Glu Ile Tyr Arg  
 225 230 235 240  
 Thr Leu Pro Val Arg Glu Glu Leu Leu Arg Gly Leu Leu Asn Cys Asp  
 245 250 255  
 Leu Ile Gly Phe His Thr Phe Asp Tyr Ala Arg His Phe Leu Ser Cys  
 260 265 270  
 Cys Cys Arg Met Leu Gly Leu Glu Tyr Glu Ser Lys Arg Gly His Ile  
 275 280 285  
 Ala Leu Asp Tyr Leu Gly Arg Thr Val Phe Leu Lys Ile Leu Pro Ile  
 290 295 300  
 Gly Ile His Met Gly Arg Leu Glu Ser Val Leu Asn Leu Pro Ala Thr  
 305 310 315 320  
 Ala Glu Lys Leu Lys Glu Ile Gln Glu Lys Tyr Arg Gly Lys Lys Ile  
 325 330 335  
 Ile Leu Gly Val Asp Asp Met Asp Ile Phe Lys Gly Leu Ser Leu Lys  
 340 345 350

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Ile Leu Ala Phe Glu His Leu Leu Gln Gln Tyr Pro Ser Met Leu Gly  
355 360

Lys Ile Val Leu Ile Gln Ile Val Asn Pro Ala Arg Gly Ser Gly Lys  
370 375 380

Asp Val Gln Glu Ala Arg Lys Glu Thr Tyr Asp Thr Val Lys Arg Ile  
385 390 400

Asn Glu Arg Tyr Gly Ser His Asp Tyr Glu Pro Val Val Leu Ile Asp  
405 410 415

Arg Pro Val Pro Arg Phe Glu Lys Ser Ala Tyr Tyr Ala Leu Ala Glu  
420 425 430

Cys Cys Ile Val Asn Ala Val Arg Asp Gly Met Asn Leu Val Pro Tyr  
435 440 445

Lys Tyr Thr Val Cys Arg Gln Gly Thr Pro Ser Met Asn Lys Ser Leu  
450 455 460

Gly Val Ser Asp Asp Leu Pro Arg Thr Ser Thr Leu Val Leu Ser Glu  
465 470 475 480

Phe Ile Gly Cys Ser Pro Ser Leu Ser Gly Ala Ile Arg Val Asn Pro  
485 490 495

Trp Asp Val Asp Ala Val Ala Asp Ser Leu Tyr Ser Ala Ile Thr Met  
500 505 510

Ser Asp Phe Glu Lys Gln Leu Arg His Lys Lys His Phe His Tyr Ile  
515 520 525

Ser Thr His Asp Val Gly Tyr Trp Ala Arg Ser Phe Ser Gln Asp Leu  
530 535 540

Glu Arg Ala Ser Arg Asp His Tyr Ser Lys Arg Cys Trp Gly Val Gly  
545 550 555 560

Trp Gly Leu Gly Phe Arg Leu Val Ala Leu Ser Pro Asn Phe Arg Arg  
565 570 575

Leu Ser Ile Glu Gln Thr Val Ser Ala Tyr Arg Arg Ser Ser Lys Arg  
580 585 590

Ala Ile Phe Leu Asp Tyr Asp Gly Thr Leu Val Pro Glu Thr Ser Ile  
595 600 605



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Val Lys Asp Pro Ser Ala Glu Val Ile Ser Ala Leu Lys Ala Leu Cys  
610 615 620

Ser Asp Pro Asn Asn Thr Ile Phe Ile Val Ser Gly Arg Gly Lys Val  
625 630 635 640

Ser Leu Ser Glu Trp Leu Ala Pro Cys Glu Asn Leu Gly Ile Ala Ala  
645 650 655

Glu His Gly Tyr Phe Thr Arg Trp Asn Lys Ser Ser Asp Trp Glu Thr  
660 665 670

Ser Gly Leu Ser Asp Asp Leu Glu Trp Lys Lys Val Val Glu Pro Ile  
675 680 685

Met Arg Leu Tyr Thr Glu Thr Thr Asp Gly Ser Asn Ile Glu Ala Lys  
690 695 700

Glu Ser Ala Leu Val Trp His His Gln Asp Ala Asp Pro Asp Phe Gly  
705 710 715 720

Ser Cys Gln Ala Lys Glu Leu Leu Asp His Leu Glu Thr Val Leu Val  
725 730 735

Asn Glu Pro Val Ile Val Asn Arg Gly His Gln Ile Val Glu Val Lys  
740 745 750

Pro Gln Gly Val Ser Lys Gly Leu Val Thr Gly Lys Ile Leu Ser Arg  
755 760 765

Met Leu Glu Asp Gly Ile Ala Pro Asp Phe Val Val Cys Ile Gly Asp  
770 775 780

Asp Arg Ser Asp Glu Glu Met Phe Glu Asn Ile Ser Thr Thr Leu Ser  
785 790 795 800

Ala Gln Ser Ser Ser Met Ser Thr Glu Ile Phe Ala Cys Thr Val Gly  
805 810 815

Arg Lys Pro Ser Lys Ala Lys Tyr Phe Leu Asp Glu Val Ser Asp Val  
820 825 830

Val Lys Leu Leu Gln Gly Leu Ala Asn Thr Ser Ser Pro Lys Pro Arg  
835 840 845

Tyr Pro Ser His Leu Arg Val Ser Phe Glu Ser Val Val

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855

860

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 <212> DNA  
 <213> *Arabidopsis thaliana*

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 ccgcgtactc agtttggtaa caatatgagt atgagtatgc ttgggaatgc tccaaatata 180  
 tcttctcttc tcaataatca gtcttttgta aatggtatcc ctggttctat gatttctatg 240  
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 ggtggattag cagggtgggg acctgttaag atggagcctg gtcaggtttc gaatgatcag 540  
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 tatgcaaaag caacacaaga gagtgtcttt gagcatctc ggggtgtctg tgatggccaa 1320  
 cttcgaatag tcttctcgc agatcttaag atattctctt gggaattttg tgctcggcgg 1380  
 catgaagagc ttattccacg aagacttttg ataccgcagg ttagtcagct tggatcgcca 1440  
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 ctcatgaacg gaagagtggg gatgatgggt cgggatccaa acgggtcaaca ggatttagga 2580  
 aaccaacttt taggagcagt gaatgggttc aacaattttg attggaacgc gtga 2634

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<211> 877

<212> PRT

<213> Arabidopsis thaliana

<400> 324

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 Pro Ala Phe Pro Ser Leu Val Ser Pro Arg Thr Gln Phe Gly Asn Asn  
 35 40 45

047-E2F-PCT.ST25.txt

Met Ser Met Ser Met Leu Gly Asn Ala Pro Asn Ile Ser Ser Leu Leu  
50 55 60

Asn Asn Gln Ser Phe Val Asn Gly Ile Pro Gly Ser Met Ile Ser Met  
65 70 75 80

Asp Thr Ser Gly Ala Glu Ser Asp Pro Met Ser Asn Val Gly Phe Ser  
85 90 95

Gly Leu Ser Ser Phe Asn Ala Ser Ser Met Val Ser Pro Arg Ser Ser  
100 105 110

Gly Gln Val Gln Gly Gln Gln Phe Ser Asn Val Ser Ala Asn Gln Leu  
115 120 125

Leu Ala Glu Gln Gln Arg Asn Lys Lys Met Glu Thr Gln Ser Phe Gln  
130 135 140

His Gly Gln Gln Gln Ser Met Gln Gln Gln Phe Ser Thr Val Arg Gly  
145 150 155 160

Gly Gly Leu Ala Gly Val Gly Pro Val Lys Met Glu Pro Gly Gln Val  
165 170 175

Ser Asn Asp Gln Gln His Gly Gln Val Gln Gln Gln Gln Lys Met  
180 185 190

Leu Arg Asn Leu Gly Ser Val Lys Leu Glu Pro Gln Gln Ile Gln Ala  
195 200 205

Met Arg Asn Leu Ala Gln Val Lys Met Glu Pro Gln His Ser Glu Gln  
210 215 220

Ser Leu Phe Leu Gln Gln Gln Gln Arg Gln Gln Gln Gln Gln Gln  
225 230 235 240

Gln Gln Phe Leu Gln Met Pro Gly Gln Ser Pro Gln Ala Gln Met Asn  
245 250 255

Ile Phe Gln Gln Gln Arg Leu Met Gln Leu Gln Gln Gln Gln Leu Leu  
260 265 270

Lys Ser Met Pro Gln Gln Arg Pro Gln Leu Pro Gln Gln Phe Gln Gln  
275 280 285

Gln Asn Leu Pro Leu Arg Pro Pro Leu Lys Pro Val Tyr Glu Pro Gly  
290 295 300

047-E2F-PCT.ST25.txt

Met Gly Ala Gln Arg Leu Thr Gln Tyr Met Tyr Arg Gln Gln His Arg  
305 310 315 320

Pro Glu Asp Asn Asn Ile Glu Phe Trp Arg Lys Phe Val Ala Glu Tyr  
325 330 335

Phe Ala Pro Asn Ala Lys Lys Arg Trp Cys Val Ser Met Tyr Gly Ser  
340 345 350

Gly Arg Gln Thr Thr Gly Val Phe Pro Gln Asp Val Trp His Cys Glu  
355 360 365

Ile Cys Asn Arg Lys Pro Gly Arg Gly Phe Glu Ala Thr Ala Glu Val  
370 375 380

Leu Pro Arg Leu Phe Lys Ile Lys Tyr Glu Ser Gly Thr Leu Glu Glu  
385 390 395 400

Leu Leu Tyr Val Asp Met Pro Arg Glu Ser Gln Asn Ser Ser Gly Gln  
405 410 415

Ile Val Leu Glu Tyr Ala Lys Ala Thr Gln Glu Ser Val Phe Glu His  
420 425 430

Leu Arg Val Val Arg Asp Gly Gln Leu Arg Ile Val Phe Ser Pro Asp  
435 440 445

Leu Lys Ile Phe Ser Trp Glu Phe Cys Ala Arg Arg His Glu Glu Leu  
450 455 460

Ile Pro Arg Arg Leu Leu Ile Pro Gln Val Ser Gln Leu Gly Ser Ala  
465 470 475 480

Ala Gln Lys Tyr Gln Gln Ala Ala Gln Asn Ala Thr Thr Asp Ser Ala  
485 490 495

Leu Pro Glu Leu Gln Asn Asn Cys Asn Met Phe Val Ala Ser Ala Arg  
500 505 510

Gln Leu Ala Lys Ala Leu Glu Val Pro Leu Val Asn Asp Leu Gly Tyr  
515 520 525

Thr Lys Arg Tyr Val Arg Cys Leu Gln Ile Ser Glu Val Val Asn Ser  
530 535 540

Met Lys Asp Leu Ile Asp Tyr Ser Arg Glu Thr Arg Thr Gly Pro Ile

545                      550                      560

Glu Ser Leu Ala Lys Phe Pro Arg Arg Thr Gly Pro Ser Ser Ala Leu  
565                      570                      575

Pro Gly Pro Ser Pro Gln Gln Ala Ser Asp Gln Leu Arg Gln Gln Gln  
580                      585                      590

Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln  
595                      600                      605

Gln Gln Gln Gln Gln Thr Val Ser Gln Asn Thr Asn Ser Asp Gln Ser  
610                      615                      620

Ser Arg Gln Val Ala Leu Met Gln Gly Asn Pro Ser Asn Gly Val Asn  
625                      630                      635

Tyr Ala Phe Asn Ala Ala Ser Ala Ser Thr Ser Thr Ser Ser Ile Ala  
645                      650                      655

Gly Leu Ile His Gln Asn Ser Met Lys Gly Arg His Gln Asn Ala Ala  
660                      665                      670

Tyr Asn Pro Pro Asn Ser Pro Tyr Gly Gly Asn Ser Val Gln Met Gln  
675                      680                      685

Ser Pro Ser Ser Ser Gly Thr Met Val Pro Ser Ser Ser Gln Gln Gln  
690                      695                      700

His Asn Leu Pro Thr Phe Gln Ser Pro Thr Ser Ser Ser Asn Asn Asn  
705                      710                      715

Asn Pro Ser Gln Asn Gly Ile Pro Ser Val Asn His Met Gly Ser Thr  
725                      730                      735

Asn Ser Pro Ala Met Gln Gln Ala Gly Glu Val Asp Gly Asn Glu Ser  
740                      745                      750

Ser Ser Val Gln Lys Ile Leu Asn Glu Ile Leu Met Asn Asn Gln Ala  
755                      760                      765

His Asn Asn Ser Ser Gly Gly Ser Met Val Gly His Gly Ser Phe Gly  
770                      775                      780

Asn Asp Gly Lys Gly Gln Ala Asn Val Asn Ser Ser Gly Val Leu Leu  
785                      790                      795                      800

Met Asn Gly Gln Val Asn Asn Asn Asn Asn Thr Asn Ile Gly Gly Ala  
 805 810 815

Gly Gly Phe Gly Gly Gly Ile Gly Gln Ser Met Ala Ala Asn Gly Ile  
 820 825 830

Asn Asn Ile Asn Gly Asn Asn Ser Leu Met Asn Gly Arg Val Gly Met  
 835 840 845

Met Val Arg Asp Pro Asn Gly Gln Gln Asp Leu Gly Asn Gln Leu Leu  
 850 855 860

Gly Ala Val Asn Gly Phe Asn Asn Phe Asp Trp Asn Ala  
 865 870 875

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<211> 3306

<212> DNA

<213> Arabidopsis thaliana

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<213> Arabidopsis thaliana

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 35 40 45

Leu Tyr Asp Gly His Asn Ile His Ser Pro Thr Asn Thr Ala Leu Leu  
 50 55 60

Leu Glu Asn Ile Lys Glu Glu Val Asp Asn Phe His Thr Asp His Tyr  
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Glu Gly Thr Pro Thr Asn Pro Ile Ser Ala Ser Arg Arg Glu Ser Val  
 85 90 95

Gly Ile Leu Asn Asp Asp Asp Glu Ala Leu Phe Arg Arg Val Glu Ser  
 100 105 110

Gln Ser Leu Lys Ala Cys Lys Ile Glu Asn Asp Glu Leu Ala Glu Ser  
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Gly Asp Thr Thr Phe Ala Leu Phe Ala Ser Leu Phe Asp Ser Ala Leu  
 Page 515

130

135

140

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 180 185 190  
 Gly Glu Ala Ala Ser Trp Ser Leu Leu Trp Asn Leu Tyr Gly Lys Gly  
 195 200 205  
 Thr Asp Glu Val Pro Glu Asn Leu Ile Leu Ile Pro Ser Thr Ser His  
 210 215 220  
 Leu Glu Ala Cys Gln Phe Val Leu Asn Asp His Thr Ala Gln Leu Cys  
 225 230 235 240  
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 260 265 270  
 Ala Gly Val Trp His His Thr Gln Arg Tyr Leu Lys Lys Asn Gly Ser  
 275 280 285  
 Asn Ala Asp Thr Leu His His Leu Asp Phe Asp Ala Pro Thr Arg Glu  
 290 295 300  
 His Ala Arg Leu Leu Pro Asp Asp Tyr Lys Gln Asp Glu Ser Val Leu  
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 420 425 430  
 Glu Ser Ala Cys Trp Ala Met Ala Lys Ser Trp Leu Asp Val Gln Val  
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 Asp Leu Glu Leu Ala Gln Ser Lys Pro Gly Leu Thr Glu Arg Phe Lys  
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 Gly Asp Pro His Met Ile Lys Phe Gly Ala His Met Val Leu Val Leu  
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 Arg Leu Leu Phe Thr Asp Glu Ile Asn Asp Ser Phe Lys Glu Lys Leu  
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 Asn Asn Val Gly Asp Leu Ile Leu His Met Tyr Ala Met Phe Leu Phe  
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 Ser Lys Gln His Glu Glu Leu Val Gly Ile Tyr Ala Ser Gln Leu Ala  
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His Ser Ser Val His Val Lys Tyr Lys Ile Phe Leu Ser Ala Met Glu  
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Tyr Leu Ser Phe Ser Pro Val Asp Asp Leu His Gly Asn Phe Glu Glu  
660 665 670

Ile Val Asp Arg Val Leu Ser Arg Ser Arg Glu Ile Lys Leu Ala Lys  
675 680 685

Tyr Asp Pro Ser Ile Asp Val Ala Glu Gln His Arg Gln Gln Ser Leu  
690 695 700

Gln Lys Ala Ile Ala Ile Gln Trp Leu Cys Phe Thr Pro Pro Ser Thr  
705 710 715 720

Ile Lys Asp Val Lys Asp Val Thr Ser Lys Leu Leu Leu Arg Ser Leu  
725 730 735

Met His Ser Asn Ile Leu Phe Arg Glu Phe Ala Leu Ile Ala Met Trp  
740 745 750

Arg Val Pro Ala Thr Pro Val Gly Ala His Thr Leu Leu Ser Tyr Leu  
755 760 765

Ala Glu Pro Leu Lys Gln Leu Ser Glu Asn Pro Asp Thr Leu Glu Asp  
770 775 780

Tyr Val Ser Glu Asn Leu Gln Glu Phe Gln Asp Trp Asn Glu Tyr Tyr  
785 790 795 800

Ser Cys Asp Ala Lys Tyr Arg Asn Trp Leu Lys Phe Gln Leu Glu Asn  
805 810 815

Ala Glu Val Thr Glu Leu Ser Glu Glu Glu Asn Gln Lys Ala Val Val  
820 825 830

Ala Ala Lys Glu Thr Leu Asp Ser Ser Leu Ser Leu Leu Arg Gln  
835 840 845

Asp Asn Pro Trp Met Thr Phe Leu Glu Asp His Val Phe Glu Ser Glu  
850 855 860

Glu Tyr Leu Phe Leu Glu Leu His Ala Thr Ala Met Leu Cys Leu Pro  
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Ser Gly Glu Cys Leu Arg Pro Asp Ala Thr Val Cys Ala Ala Leu Met  
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 930 935 940  
 Asn Ala Asn Asp Gly Gly Ile Leu Ser Ala Val Ala Ala Ala Gly Phe  
 945 950 955 960  
 Lys Gly Ser Asp Ile Tyr Gly Thr Tyr Phe Ser Phe Thr Tyr Asp Leu  
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 Pro Pro Phe Ser Ile Glu Ile Trp Gly Cys Glu Leu Thr Arg Phe Gln  
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 Ala Gly Val Thr Met Asp Ile Ser Arg Leu Asp Ala Trp Tyr Ser Ser  
 995 1000 1005  
 Lys Glu Gly Ser Leu Glu Thr Pro Ala Thr Tyr Ile Val Arg Gly  
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 Leu Cys Arg Arg Cys Cys Leu Pro Glu Leu Val Leu Arg Ser Met  
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&lt;211&gt; 423

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

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 Gly Cys Thr Ala Lys Glu Arg Ile Ser Lys Met Pro Pro Cys Thr Ala  
 50 55 60  
 Gly Lys Arg Ser Ser Ile Tyr Arg Gly Val Thr Arg His Arg Trp Thr  
 65 70 75 80  
 Gly Arg Tyr Glu Ala His Leu Trp Asp Lys Ser Thr Trp Asn Gln Asn  
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 Gln Asn Lys Lys Gly Lys Gln Val Tyr Leu Gly Ala Tyr Asp Asp Glu  
 100 105 110  
 Glu Ala Ala Ala Arg Ala Tyr Asp Leu Ala Ala Leu Lys Tyr Trp Gly  
 115 120 125  
 Pro Gly Thr Leu Ile Asn Phe Pro Val Thr Asp Tyr Thr Arg Asp Leu  
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 Glu Glu Met Gln Asn Leu Ser Arg Glu Glu Tyr Leu Ala Ser Leu Arg  
 145 150 155 160  
 Arg Lys Ser Ser Gly Phe Ser Arg Gly Ile Ala Lys Tyr Arg Gly Leu  
 165 170 175  
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 180 185 190  
 Phe Ser Asn Ile His Tyr Gly Ala Gly Asp Asp Arg Gly Thr Glu Gly  
 195 200 205  
 Asp Phe Leu Gly Ser Phe Cys Leu Glu Arg Lys Ile Asp Leu Thr Gly  
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 Tyr Ile Lys Trp Trp Gly Ala Asn Lys Asn Arg Gln Pro Glu Ser Ser  
 225 230 235 240  
 Ser Lys Ala Ser Glu Asp Ala Asn Val Glu Asp Ala Gly Thr Glu Leu  
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Lys Thr Leu Glu His Thr Ser His Ala Thr Glu Pro Tyr Lys Ala Pro  
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Asn Leu Gly Val Leu Cys Gly Thr Gln Arg Lys Glu Lys Glu Ile Ser  
275 280 285

Ser Pro Ser Ser Ser Ser Ala Leu Ser Ile Leu Ser Gln Ser Pro Ala  
290 295 300

Phe Lys Ser Leu Glu Glu Lys Val Leu Lys Ile Gln Glu Ser Cys Asn  
305 310 315 320

Asn Glu Asn Asp Glu Asn Ala Asn Arg Asn Ile Ile Asn Met Glu Lys  
325 330 335

Asn Asn Gly Lys Ala Ile Glu Lys Pro Val Val Ser His Gly Val Ala  
340 345 350

Leu Gly Gly Ala Ala Ala Leu Ser Leu Gln Lys Ser Met Tyr Pro Leu  
355 360 365

Thr Ser Leu Leu Thr Ala Pro Leu Leu Thr Asn Tyr Asn Thr Leu Asp  
370 375 380

Pro Leu Ala Asp Pro Ile Leu Trp Thr Pro Phe Leu Pro Ser Gly Ser  
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<210> 330

<211> 346

<212> PRT

<213> *Arabidopsis thaliana*

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20 25 30

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35 40 45

Ser Leu Ile Glu Gln Tyr Pro Asn Arg Val Glu Ile Val Gln Leu Asp  
50 55 60

Glu Ser Asn Gly Glu Ile Arg Ser Asp Pro Asn Leu Cys Phe Glu His  
65 70 75 80

Pro Tyr Pro Pro Thr Lys Thr Ser Phe Ile Pro Asp Lys Glu Cys Gln  
Page 523

Arg Pro Asp Leu Leu Ala Thr Ser Ser Asp Phe Leu Arg Leu Trp Arg  
 100 105 110  
 Ile Ser Asp Asp Glu Ser Arg Val Glu Leu Lys Ser Cys Leu Ser Ser  
 115 120 125  
 Asp Lys Asn Ser Glu Phe Ser Gly Pro Ile Thr Ser Phe Asp Trp Asn  
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 Glu Ala Glu Pro Arg Arg Ile Gly Thr Ser Ser Ile Asp Thr Thr Cys  
 145 150 155 160  
 Thr Ile Trp Asp Ile Glu Arg Glu Val Val Asp Thr Gln Leu Ile Ala  
 165 170 175  
 His Asp Lys Glu Val Tyr Asp Ile Ala Trp Gly Gly Val Gly Val Phe  
 180 185 190  
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 195 200 205  
 Lys Glu His Ser Thr Ile Ile Tyr Glu Ser Gly Glu Pro Ser Thr Pro  
 210 215 220  
 Leu Val Arg Leu Ser Trp Asn Lys Gln Asp Pro Arg Tyr Met Ala Thr  
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 245 250 255  
 Ala Leu Pro Val Val Glu Leu Gln Arg His Gln Ala Ser Val Asn Ala  
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 Ile Ala Trp Ala Pro His Ser Ser Ser His Ile Cys Ser Ala Gly Asp  
 275 280 285  
 Asp Ser Gln Ala Leu Ile Trp Asp Ile Ser Ser Met Gly Gln His Val  
 290 295 300  
 Glu Gly Gly Leu Asp Pro Ile Leu Ala Tyr Thr Ala Gly Ala Glu Val  
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<212> DNA

<213> Arabidopsis thaliana

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<213> Arabidopsis thaliana

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Leu Gln Phe His Lys Asn Ile Lys Arg Leu Glu Ser Ser Val Pro Pro  
35 40 45

Ser Ala Ser Ala Ser Ala Ser Pro Ala Phe Pro Ile Asp Val Glu Tyr  
50 55 60

Leu Arg Arg Glu Phe Ser Gly His Gly Ala Thr Phe Glu Asp Ile Gly  
65 70 75 80

Glu Thr Cys Ile Ala Arg Leu Lys Leu Asp Asn Gly Ser Ser Ala Asn  
85 90 95

Val Met Leu Thr Arg Gly Met Ile Thr Ser Tyr Lys Val Arg Val Trp  
100 105 110

His Gly Gly Lys Val Glu Leu Leu His Thr Trp Val Glu Gln Glu Glu  
115 120 125

Glu Glu Val Val Ile Arg Gly Gly Val Ser Ser Ala Phe Arg Ser Ser  
130 135 140

Asp Ser Asp Glu Ile Ser Asp Trp Arg Leu Gln Gly Ile Ser Gly Asp  
145 150 155 160

Ser Lys Asp Cys Val Gln Met Glu Leu Arg Arg Ser Asp Lys Lys Ile  
165 170 175

Lys Glu Ile Glu Leu Lys Gln Ile Ile Ser Leu Arg Glu Asn Thr Leu  
180 185 190

Ser Ile Glu Leu Ser Met Thr Asn Lys Gly Ile Ser Pro Ile Lys Leu  
195 200 205

Glu Gly Cys Ser Leu Val Ser Tyr Leu Thr Val Ser Thr Pro Glu Ala  
210 215 220

Thr Tyr Ala Val Gly Leu Glu Gly Ser Asp Phe Val Glu Thr Thr Pro  
225 230 235 240

Phe Leu Pro Arg Phe Gly Val Val Gln Gly Glu Lys Glu Glu Glu Lys  
245 250 255

Pro Gly Phe Gly Gly Glu Glu Glu Ser Asn Tyr Lys Gln Leu Asn Arg  
260 265 270

047-E2F-PCT.ST25.txt

Glu Met Ser Arg Ile Tyr Thr Cys Ala Pro Lys Ser Phe Thr Val Ile  
275 285

Asp Arg Val Val Ile Leu Thr Lys Leu Gln Leu Tyr Leu Asn Phe Leu  
290 295 300

Cys Gly Phe Ile  
305

<210> 333

<211> 939

<212> DNA

<213> Arabidopsis thaliana

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<400> 333
atgcttgaag ttagatcaat ggatgatgact ccaaaatcac cagaaccgga atccgaaact    60
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caccaccacc accacaacaa caacaaagtc acttacaag aatgtctcaa gaaccacgcg    180
gcggcgattg gtggtcacgc gcttgacggg tgcggcgaat ttatgccgtc tccttcgtca    240
acaccttcgg atccaacttc tctcaagtgt gcagcttggt gttgtcaccg taacttcac    300
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acaaccgccg caattgagta tcagcctcat caccgtcatc atcctctctc tccgctagct    420
ctccggttac cacgtagtcc taattcatct tctccgccgc ctatctcttc ctctcatatg    480
cttttagctc tctccggtaa taataaaacc gcaccgttct cagatctaaa ctctccgcc    540
gcggctaacc atctctccgc cagcctggc tcgaggaagc gattcaggac gaagtttagc    600
tcaaatacga aagagaagat gcatgaattc gccgatcgaa tcggttgtaa gattcagaaa    660
cgtgacgaag acgaagtctg tgatttttgc cgtgagatcg gagttgataa aggtgttctc    720
aaagtgttga tgataataa caaaaactcc ttcaaattct ccggcgagg agcaaccacc    780
gtgcagagaa acgataacgg tatcggcggc gagaacagta acgatgatgg agttcgcggg    840
ttagctaacg acggtgacgg tgggtggtgg agatttgaga gtgatagtgg aggagctgat    900
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<210> 334

<211> 312

<212> PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 334

Met Leu Glu Val Arg Ser Met Asp Met Thr Pro Lys Ser Pro Glu Pro  
1 5 10 15Glu Ser Glu Thr Pro Thr Arg Ile Gln Pro Ala Lys Pro Ile Ser Phe  
20 25 30Ser Asn Gly Ile Ile Lys Arg His His His His His Asn Asn Asn  
35 40 45Lys Val Thr Tyr Lys Glu Cys Leu Lys Asn His Ala Ala Ile Gly  
50 55 60Gly His Ala Leu Asp Gly Cys Gly Glu Phe Met Pro Ser Pro Ser Ser  
65 70 75 80Thr Pro Ser Asp Pro Thr Ser Leu Lys Cys Ala Ala Cys Gly Cys His  
85 90 95Arg Asn Phe His Arg Arg Glu Thr Asp Asp Ser Ser Ala Val Pro Pro  
100 105 110Pro Ser Leu Leu Pro Ser Ser Thr Thr Thr Ala Ala Ile Glu Tyr Gln  
115 120 125Pro His His Arg His His Pro Pro Pro Pro Leu Ala Pro Pro Leu Pro  
130 135 140Arg Ser Pro Asn Ser Ser Ser Pro Pro Pro Ile Ser Ser Ser Tyr Met  
145 150 155 160Leu Leu Ala Leu Ser Gly Asn Asn Lys Thr Ala Pro Phe Ser Asp Leu  
165 170 175Asn Phe Ala Ala Ala Ala Asn His Leu Ser Ala Thr Pro Gly Ser Arg  
180 185 190Lys Arg Phe Arg Thr Lys Phe Ser Ser Asn Gln Lys Glu Lys Met His  
195 200 205Glu Phe Ala Asp Arg Ile Gly Trp Lys Ile Gln Lys Arg Asp Glu Asp  
210 215 220

Glu Val Arg Asp Phe Cys Arg Glu Ile Gly Val Asp Lys Gly Val Leu  
 225 230 235 240

Lys Val Trp Met His Asn Asn Lys Asn Ser Phe Lys Phe Ser Gly Gly  
 245 250 255

Gly Ala Thr Thr Val Gln Arg Asn Asp Asn Gly Ile Gly Gly Glu Asn  
 260 265 270

Ser Asn Asp Asp Gly Val Arg Gly Leu Ala Asn Asp Gly Asp Gly Gly  
 275 280 285

Gly Gly Arg Phe Glu Ser Asp Ser Gly Gly Ala Asp Gly Gly Gly Asn  
 290 295 300

Val Asn Ala Ser Ser Ser Ser Ser  
 305 310

<210> 335

<211> 1065

<212> DNA

<213> Arabidopsis thaliana

<400> 335  
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 cctcgagaac tcgccgttgt tgctcaaacc tgcaaaacct tatccctaata ctcgaaatct 180  
 ctaaccattc accgatctct cgacgctgca cgatccttgg aaaacatctc aatcccgttt 240  
 cacaactcca tcgattctca acgatacgcg tacttcatct acacaccttt tcagatcccc 300  
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 gagtctagac cttgttttga ctcagtgagt gaaagcggac gttttggggt gagtttagtg 420  
 gagcagtcag gatgcgaatg cgagagggtg gaggaaggat actgcaagtg tttagctttc 480  
 gcggggatgg aagagatagc taacgaatgt gggtcgggtt gtggatgcgg gtccgattgt 540  
 tcgaaccggg ttacgcagaa ggggggttgc gttagtttga agattgtgag agatgagaag 600  
 aaagggttgg gcttgtacgc tgaccagctt atcaagcaag gccaatcatc ctgtgaatat 660  
 gcaggtagc tattgacaac agatgaagca cgtagacgtc aaaacattta cgacaaactc 720  
 agatcaacac aatccttcgc ttcagctctt ttggtcgtac gcgaacacct cccttcagga 780  
 caagcttgtt taaggataaa catcgacgcc acaagaattg ggaacgttgc tagattcatc 840

aaccattctt gtgacggtgg aaatctctcc actgttctgt tgagaagctc aggagcgttg 900  
 cttcctcggc tctgtttctt tgcagcaaag gacataatcg cagaggagga gttaagtttc 960  
 agttatggag acgtaagtgt ggccggagag aacagagacg acaagctaaa ctgctcttgt 1020  
 ggtagtctct gctgtttggg aacgttgctt tgtgagaata cctga 1065

<210> 336

<211> 354

<212> PRT

<213> Arabidopsis thaliana

<400> 336

Met Gln Arg Leu Arg Glu Ser Pro Pro Lys Thr Arg Cys Leu Gly  
 1 5 10 15

Glu Ala Ser Asp Ile Ile Pro Ala Ala Asp Arg Phe Leu Arg Cys Ala  
 20 25 30

Asn Leu Ile Leu Pro Trp Leu Asn Pro Arg Glu Leu Ala Val Val Ala  
 35 40 45

Gln Thr Cys Lys Thr Leu Ser Leu Ile Ser Lys Ser Leu Thr Ile His  
 50 55 60

Arg Ser Leu Asp Ala Ala Arg Ser Leu Glu Asn Ile Ser Ile Pro Phe  
 65 70 75 80

His Asn Ser Ile Asp Ser Gln Arg Tyr Ala Tyr Phe Ile Tyr Thr Pro  
 85 90 95

Phe Gln Ile Pro Ala Ser Ser Pro Pro Pro Arg Gln Trp Trp Gly  
 100 105 110

Ala Ala Ala Asn Glu Cys Gly Ser Glu Ser Arg Pro Cys Phe Asp Ser  
 115 120 125

Val Ser Glu Ser Gly Arg Phe Gly Val Ser Leu Val Asp Glu Ser Gly  
 130 135 140

Cys Glu Cys Glu Arg Cys Glu Glu Gly Tyr Cys Lys Cys Leu Ala Phe  
 145 150 155 160

Ala Gly Met Glu Glu Ile Ala Asn Glu Cys Gly Ser Gly Cys Gly Cys  
 165 170 175



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Gly Ser Asp Cys Ser Asn Arg Val Thr Gln Lys Gly Val Ser Val Ser  
180 185 190

Leu Lys Ile Val Arg Asp Glu Lys Lys Gly Trp Cys Leu Tyr Ala Asp  
195 200 205

Gln Leu Ile Lys Gln Gly Gln Phe Ile Cys Glu Tyr Ala Gly Glu Leu  
210 215 220

Leu Thr Thr Asp Glu Ala Arg Arg Arg Gln Asn Ile Tyr Asp Lys Leu  
225 230 235 240

Arg Ser Thr Gln Ser Phe Ala Ser Ala Leu Leu Val Val Arg Glu His  
245 250 255

Leu Pro Ser Gly Gln Ala Cys Leu Arg Ile Asn Ile Asp Ala Thr Arg  
260 265 270

Ile Gly Asn Val Ala Arg Phe Ile Asn His Ser Cys Asp Gly Gly Asn  
275 280 285

Leu Ser Thr Val Leu Leu Arg Ser Ser Gly Ala Leu Leu Pro Arg Leu  
290 295 300

Cys Phe Phe Ala Ala Lys Asp Ile Ile Ala Glu Glu Glu Leu Ser Phe  
305 310 315 320

Ser Tyr Gly Asp Val Ser Val Ala Gly Glu Asn Arg Asp Asp Lys Leu  
325 330 335

Asn Cys Ser Cys Gly Ser Ser Cys Cys Leu Gly Thr Leu Pro Cys Glu  
340 345 350

Asn Thr

<210> 337

<211> 1005

<212> DNA

<213> Arabidopsis thaliana

<400> 337

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60

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aaacctaatt gaacatctga gaggcaaaaa tctacaagct gttgcttaca ctctaccaca 240
tcttctctga cacaaaaataa tgatttttgt tgcttccgct ccattccagg aactgagagt 300
gtggaaggaa aagagggtgac aagcgagcaa atgatatcgc catctgacac ttactgcct 360
cttgtgacag ttcttgctcc atcgagcaaa gagaatggag tcatgtgggc aacttctcct 420
gatcgctctg aacttcccc aagaccatac aatcacaaatt caaactgctc agattctcct 480
tgcgatatct aaaccagctc agacattttc agcaaacgag aagtaataca gaaactaagg 540
cagcagctga agagacggga tgacatgata caggaaatgc aagaacagat tctagagctg 600
caaaactcgt ataacgcaca gacggcacac tcaagccatc tcagggcaca gctagacaca 660
ctgaacagag atctgtttga atcagaaaga gaagttcaaa gactgagaaa ggcaattgct 720
gatcacagcg tgggatgtgg cgcggacagc aatggcaaga catctccggt tggaccttgg 780
aatggcgggt ttatggacag cgaagcaat tatgagtcac aagaaaagag cctaagggat 840
ggagaagag tagagatgtt gagaaaggaa gtgagtgagc ttaaagaagt gatagatggg 900
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gagttgcagc agagactgga ctacagctc caaaacttat tgtag 1005

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&lt;210&gt; 338

&lt;211&gt; 334

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 338

Met Ser Thr Arg Arg Asn Gly Ile Ser Lys His Gln Arg Gly Asp Lys  
1 5 10 15

Phe Cys Gly Glu Gly Pro Asn Trp Ile Leu Ile Ala Gly Gly Ala Leu  
20 25 30

Leu Ser Thr Leu Ser Ile Arg Phe Gly Tyr Lys Leu Lys Gln Ser Leu  
35 40 45

Asp Ser Lys Pro Gln Ser Asn Gly Ser Ala Gly Leu Lys Pro Asn Gly  
50 55 60

Thr Ser Glu Arg Gln Lys Ser Thr Ser Cys Cys Leu His Ser Thr Thr  
65 70 75 80

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Ser Ser Cys Thr Gln Asn Asn Asp Phe Cys Cys Phe Arg Ser Ile Pro  
85 90 95

Gly Thr Glu Ser Val Glu Gly Lys Glu Val Thr Ser Glu Gln Met Ile  
100 105 110

Ser Ala Ser Asp Thr Ser Leu Pro Leu Val Thr Val Pro Ala Pro Ser  
115 120 125

Ser Lys Glu Asn Gly Val Met Trp Ala Thr Ser Pro Asp Arg Leu Glu  
130 135 140

Leu Pro Pro Arg Pro Tyr Asn His Asn Ser Asn Cys Ser Asp Ser Pro  
145 150 155 160

Cys Val Ser Glu Thr Ser Ser Asp Ile Phe Ser Lys Arg Glu Val Ile  
165 170 175

Gln Lys Leu Arg Gln Gln Leu Lys Arg Arg Asp Asp Met Ile Gln Glu  
180 185 190

Met Gln Glu Gln Ile Leu Glu Leu Gln Asn Ser Tyr Asn Ala Gln Thr  
195 200 205

Ala His Ser Ser His Leu Gln Ala Gln Leu Asp Thr Leu Asn Arg Asp  
210 215 220

Leu Phe Glu Ser Glu Arg Glu Val Gln Arg Leu Arg Lys Ala Ile Ala  
225 230 235 240

Asp His Ser Val Gly Cys Gly Ala Asp Ser Asn Gly Lys Thr Ser Pro  
245 250 255

Val Gly Pro Trp Asn Gly Gly Phe Met Asp Ser Glu Ser Asn Tyr Glu  
260 265 270

Ser Gln Glu Lys Ser Leu Arg Asp Gly Glu Arg Val Glu Met Leu Arg  
275 280 285

Lys Glu Val Ser Glu Leu Lys Glu Val Ile Asp Gly Lys Glu Tyr Leu  
290 295 300

Leu Arg Ser Tyr Lys Glu Gln Lys Ile Glu Leu Ser Gln Lys Val Lys  
305 310 315 320

Glu Leu Gln Gln Arg Leu Asp Ser Gln Leu Gln Asn Leu Leu

<210> 339

<211> 807

<212> DNA

<213> Arabidopsis thaliana

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<400> 339
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tcttcacaga ctgagaaatc tgattcattg cctgttaatg atggcttga gagttcattt    180
actggaatga agaaaaagaa gaagaagcca actgaatcaa gcttattgaa caacgaaagt    240
gttgatgctg ggggaagattt ggaatgagatt gctaatacag agcaagaggg ggaagaagga    300
atagttctac agcaacgtta cccctgggag ggaagtgaga gggattacat atatgacgag    360
cttcttggtg gactctttaa cattctccgt gaaaataatc cggagcttgc tggagatagg    420
cgctgtacag ttatgagccc tctcaagtt cttctgtagg ggacaagaa gactgtcttt    480
gtcaacttca tggacctttg caagacgatg catcgtcaac cagatcatgt tatgcaatac    540
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ggaaggtttg cacctaagaa ttttgaagga attttgggc gatatatcac tgactacgac    660
atttgctctg gttgcaagag ccagacacc attctctcca aggagaaccg tctcttcttt    720
ctgagatgtg aaaagtgtgg atctcaacga tctgtggctc cgatcaaacc aggggttggt    780
gctcgtgtta gtcgcaggaa gacttga                                     807

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<210> 340

<211> 268

<212> PRT

<213> Arabidopsis thaliana

<400> 340

Met Ala Asp Glu Ile Asn Glu Ile Arg Glu Glu Gln Glu Gln Leu Ala  
1 5 10 15

Pro Phe Asp Pro Ser Lys Lys Lys Lys Lys Lys Val Val Ile Gln  
20 25 30

Glu Pro Val Glu Asp Leu Ala Glu Ser Ser Gln Thr Glu Lys Ser Asp  
 35 40 45

Ser Leu Pro Val Asn Asp Gly Leu Glu Ser Ser Phe Thr Gly Met Lys  
 50 55 60

Lys Lys Lys Lys Lys Pro Thr Glu Ser Ser Leu Leu Asn Asn Glu Ser  
 65 70 75 80

Val Asp Ala Gly Glu Asp Leu Asp Glu Ile Ala Asn Asp Glu Gln Glu  
 85 90 95

Gly Glu Glu Gly Ile Val Leu Gln Gln Arg Tyr Pro Trp Glu Gly Ser  
 100 105 110

Glu Arg Asp Tyr Ile Tyr Asp Glu Leu Leu Gly Arg Val Phe Asn Ile  
 115 120 125

Leu Arg Glu Asn Asn Pro Glu Leu Ala Gly Asp Arg Arg Arg Thr Val  
 130 135 140

Met Arg Pro Pro Gln Val Leu Arg Glu Gly Thr Lys Lys Thr Val Phe  
 145 150 155 160

Val Asn Phe Met Asp Leu Cys Lys Thr Met His Arg Gln Pro Asp His  
 165 170 175

Val Met Gln Tyr Leu Leu Ala Glu Leu Gly Thr Ser Gly Ser Leu Asp  
 180 185 190

Gly Gln Gln Arg Leu Val Val Lys Gly Arg Phe Ala Pro Lys Asn Phe  
 195 200 205

Glu Gly Ile Leu Arg Arg Tyr Ile Thr Asp Tyr Val Ile Cys Leu Gly  
 210 215 220

Cys Lys Ser Pro Asp Thr Ile Leu Ser Lys Glu Asn Arg Leu Phe Phe  
 225 230 235 240

Leu Arg Cys Glu Lys Cys Gly Ser Gln Arg Ser Val Ala Pro Ile Lys  
 245 250 255

Thr Gly Phe Val Ala Arg Val Ser Arg Arg Lys Thr  
 260 265

<210> 341

<211> 1704

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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<400> 341
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ggtaacaagta ctttgatac aagactttta gcttcttcta gttctgttgg gaaagcgggt      180
ttggacagga cagaatcatc tgcgtcacat cattcagatg aagaagcacg tcagttctgg      240
agtcatacaac ttctgtgatg tataactcca gattttgggt tgatgactca agatgacaat      300
tcttatggat ctggtagttt gtcactagct aacttgctgt tgttgacgg taatgaagct      360
gagaagtttc cttctgctag tggaggatat ggcttttcag atcaaaactgg attagcttca      420
cataatgcta atggtaatat cttggctgat aagagtagat atcccatctt ttcatttggg      480
gaagatcctc agcgacagag ttcatgcaa ctgagtccaa agccttggga taagcaaatc      540
atgaatgctg agcagcttct tgggaatgac agggaaagaa acccttttag tgggaaatct      600
cgacatggct ttgttaacga catgattact gagagtcag gggatatgga ggtgaaccct      660
gtggattttc tcgcttctca gttccccgga ttcgccgctg agagtctagc agaagtttat      720
tttgctaatt ggtgtgattt gcagttgaca attgagatgc ttactcagct tgagctacaa      780
gtggatgggt gcttgaatca aaacataagc cctaagactt atgctcctcc tagtctaact      840
ccaatggatt ttctctgact aagcatctca aatagccatg gtattcctgc ccagtttgggt      900
ggggatgatt tgcaacaaac tggaaatcat taccaatctc ctgaaaagga taacatgttc      960
ttcttcaagt cgggaccatc ggtttctcag cctgggtgcaa tcgattatgt ttctgctgtc     1020
aggaagttag catctcagga ttctggtatg tggaaatatg aacgaaatga ttcagcagac     1080
tcattctattg gctctagcag gaattctggt gcttacaaaa gtggccgttg gaggagtata     1140
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ttgcggaatg tgtactttga acaggcacga caagcatacc ttgttgggaa taagccctta     1320
gccaaagagc taagtgttaa gggacagtgt cataatatgc aaatgaaggc tgctcatggg     1380
aaagctcaag aagccattta ccgccagagg aaccagatgg gtcaaggaaa cagtagaggg     1440
aatgagagaa tgatagactt gcatgggtta catgtgagtg aagcacttca ggtgttgaag     1500
cacgaactga gtgtgttgag gagcacagct cgagcaacgc aagagaggct tcagatttac     1560
atatgtgtag ggacaggcca ccacacaagg ggttcccgca ctccggctag actcccagtt     1620
gctgtacagc gctacctact cgaagaagaa ggtcttgact attccgaacc acaggccggt     1680

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ctccttagag tcacatata ctga

1704

&lt;210&gt; 342

&lt;211&gt; 567

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 342

Met Ser Leu Thr Lys Lys Ala Ser Glu Pro Lys Leu Ser Gly Thr Ser  
1 5 10 15Ile Lys Pro Thr Thr Leu Asn Pro His Ala Ala Glu Phe Val Pro Phe  
20 25 30Thr Leu Arg Ser Pro Ser Ser Gly Gly Thr Ser Thr Leu Asp Thr Arg  
35 40 45Leu Leu Ala Ser Ser Ser Ser Val Gly Lys Ala Val Leu Asp Arg Thr  
50 55 60Glu Ser Ser Ala Ser His His Ser Asp Glu Glu Ala Arg Gln Phe Trp  
65 70 75 80Ser His Gln Leu Pro Asp Asp Ile Thr Pro Asp Phe Gly Leu Met Thr  
85 90 95Gln Asp Asp Asn Ser Tyr Gly Ser Gly Ser Leu Ser Leu Ala Asn Leu  
100 105 110Ser Leu Phe Asp Gly Asn Glu Ala Glu Lys Phe Pro Ser Ala Ser Gly  
115 120 125Gly Tyr Gly Phe Ser Asp Gln Thr Gly Leu Ala Ser His Asn Ala Asn  
130 135 140Gly Asn Ser Leu Ala Asp Lys Ser Arg Tyr Pro Ile Ser Ser Phe Gly  
145 150 155 160Glu Asp Pro Gln Arg Gln Ser Phe Met Gln Leu Ser Pro Lys Pro Trp  
165 170 175Asp Lys Gln Ile Met Asn Ala Glu Gln Leu Leu Gly Asn Asp Arg Glu  
180 185 190

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Arg Asn Pro Phe Ser Gly Lys Ser Arg His Gly Phe Val Asn Asp Met  
195 200 205

Ile Thr Glu Ser Pro Gly Asp Met Glu Val Asn Pro Val Asp Phe Leu  
210 215 220

Ala Ser Gln Phe Pro Gly Phe Ala Ala Glu Ser Leu Ala Glu Val Tyr  
225 230 235 240

Phe Ala Asn Gly Cys Asp Leu Gln Leu Thr Ile Glu Met Leu Thr Gln  
245 250 255

Leu Glu Leu Gln Val Asp Gly Gly Leu Asn Gln Asn Ile Ser Pro Lys  
260 265 270

Thr Tyr Ala Pro Pro Ser Leu Thr Pro Met Asp Phe Pro Ala Leu Ser  
275 280 285

Ile Ser Asn Ser His Gly Ile Pro Ala Gln Phe Gly Gly Asp Asp Leu  
290 295 300

Gln Gln Thr Gly Asn His Tyr Gln Ser Pro Glu Lys Asp Asn Met Phe  
305 310 315 320

Phe Phe Lys Ser Gly Pro Ser Val Ser Gln Pro Gly Ala Ile Asp Tyr  
325 330 335

Val Ser Ala Val Arg Lys Leu Ala Ser Gln Asp Ser Gly Met Trp Lys  
340 345 350

Tyr Glu Arg Asn Asp Ser Ala Asp Ser Ser Ile Gly Ser Ser Arg Asn  
355 360 365

Ser Gly Ala Tyr Lys Ser Gly Arg Gly Arg Ser Ile Tyr Ser Asp Lys  
370 375 380

Leu Gln Ser Arg Ala Gln Thr Arg Pro Ala Pro Val Trp Val Glu Thr  
385 390 395 400

Gly Asp Ala Val Gly Asn Met Tyr Ser Glu Leu Arg Glu Glu Ala Arg  
405 410 415

Asp Tyr Ala Arg Leu Arg Asn Val Tyr Phe Glu Gln Ala Arg Gln Ala  
420 425 430

Tyr Leu Val Gly Asn Lys Ala Leu Ala Lys Glu Leu Ser Val Lys Gly  
435 440 445



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Gln Leu His Asn Met Gln Met Lys Ala Ala His Gly Lys Ala Gln Glu  
450 455 460

Ala Ile Tyr Arg Gln Arg Asn Pro Val Gly Gln Gly Asn Ser Arg Gly  
465 470 475 480

Asn Glu Arg Met Ile Asp Leu His Gly Leu His Val Ser Glu Ala Leu  
485 490 495

Gln Val Leu Lys His Glu Leu Ser Val Leu Arg Ser Thr Ala Arg Ala  
500 505 510

Thr Gln Glu Arg Leu Gln Ile Tyr Ile Cys Val Gly Thr Gly His His  
515 520 525

Thr Arg Gly Ser Arg Thr Pro Ala Arg Leu Pro Val Ala Val Gln Arg  
530 535 540

Tyr Leu Leu Glu Glu Glu Gly Leu Asp Tyr Ser Glu Pro Gln Ala Gly  
545 550 555 560

Leu Leu Arg Val Ile Ile Tyr  
565

<210> 343

<211> 1206

<212> DNA

<213> Arabidopsis thaliana

<400> 343  
atgggtaata agttgggaag gaagaggcaa gtgggtggaag aaagggtatac aaagcctcaa 60  
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aagcttgctc cttgctatcc tggagacgat gaaagctgtc atgatcttga agaattgtcca 180  
atttgttttc tgtactatcc tagcctcaat agatcaagat gttgcatgaa aagcatttgt 240  
acagagtgtt ttttgcaaat gaagaatcct aattcagctc ggccactca gtgccctttt 300  
tgtaaaactc ccaactatgc tgtcgagtat cgtggagtca agtcaaagga ggaaaagggc 360  
attgaacaag ttgaagagca acgggtaata gaagccaaaa taaggatgag gcagaaagaa 420  
atgcaggatg atgaagagaa aatgcagaaa cgtcttgaat catgttcctc tagcacaagc 480  
gcaatgactg gcgagatgga atatggttca acttcagcca tatcttataa ctccctcatg 540

gatgacgggg aaattgctcc atcgcagaac gcatctgttg ttagacaaca ttccccccg 600  
 cgaggaaaca gggaggatga ggttgacgtt gaccttgagg aattgatggt catggaagca 660  
 atatgctct ctgttcagga aacagggacg cagagaaatt cagcttcagg ggaattacc 720  
 tcttctaggc agtatgtaac agataatcat agttatgtt cttcaccacc acgagtgaact 780  
 ccaatcgtag aaccagcaac accgtcttca tcatctggtg ggctttcttg tgcaatctcc 840  
 gcacttgcg aacgccaaat ggttgcgaa tcctccagtc acaatcataa tcacaatgtc 900  
 aacgtttctt catacagtat gcttcccgga aattgtgaca gttactacga catagaacaa 960  
 gaggtagatg gcatagacaa ccatcatcat catcgtcatc attacgagat gggagaaaca 1020  
 ggaagcagca acagctatgt aagttcttac atgacaggcg agggcttcca caactttcct 1080  
 cctcctccac ctctgggtcat tgttccagag agttttgagg aacagatgat gatggctatg 1140  
 gctgtgtcta tggcagaggt tcatgccacg acgacatgtg caccaactga agttacctgg 1200  
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<210> 344

<211> 401

<212> PRT

<213> *Arabidopsis thaliana*

<400> 344

Met Gly Asn Lys Leu Gly Arg Lys Arg Gln Val Val Glu Glu Arg Tyr  
1 5 10 15

Thr Lys Pro Gln Gly Leu Tyr Val Asn Lys Asp Val Asp Val Lys Lys  
20 25 30

Leu Arg Lys Leu Ile Val Glu Ser Lys Leu Ala Pro Cys Tyr Pro Gly  
35 40 45

Asp Asp Glu Ser Cys His Asp Leu Glu Glu Cys Pro Ile Cys Phe Leu  
50 55 60

Tyr Tyr Pro Ser Leu Asn Arg Ser Arg Cys Cys Met Lys Ser Ile Cys  
65 70 75 80

Thr Glu Cys Phe Leu Gln Met Lys Asn Pro Asn Ser Ala Arg Pro Thr  
85 90 95

Gln Cys Pro Phe Cys Lys Thr Pro Asn Tyr Ala Val Glu Tyr Arg Gly  
100 105 110

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Val Lys Ser Lys Glu Glu Lys Gly Ile Glu Gln Val Glu Glu Gln Arg  
115 120 125

Val Ile Glu Ala Lys Ile Arg Met Arg Gln Lys Glu Met Gln Asp Asp  
130 135 140

Glu Glu Lys Met Gln Lys Arg Leu Glu Ser Cys Ser Ser Ser Thr Ser  
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Val Gln Glu Thr Gly Thr Gln Arg Asn Ser Ala Ser Gly Glu Ile Thr  
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Ser Ser Arg Gln Tyr Val Thr Asp Asn His Ser Tyr Val Ser Ser Pro  
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Ser Glu Val Thr Ala Ala Leu Arg Ile Thr Asp Gly Ala Leu Val Val  
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195 200 205  
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Trp Ser Gly Lys Asn Thr Gly Ser Pro Thr Cys Lys Arg Gly Phe Val  
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 755 760 765



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<213> Arabidopsis thaliana

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 Arg Ile Phe His Phe Ser Arg Glu Ala Ile Thr Lys Leu Lys Gln Arg  
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 245 250 255  
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Arg Leu Phe Pro Leu Gly Asn Pro Asp Gly Ala Ser Ile Thr Met Gly  
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Ser Ser Pro Arg Phe Pro Met Tyr Asp Asn Asp Phe Gly Trp Gly Lys  
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Pro Leu Ala Val Arg Ser Gly Gly Ala Asn Lys Phe Asp Gly Lys Ile  
420 425 430

Ser Ala Phe Pro Gly Arg Glu Gly Asn Gly Ser Val Asp Leu Glu Val  
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<212> PRT

<213> Arabidopsis thaliana

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35 40 45

Arg Ala Glu Gln Glu Glu Ser Glu Arg Ile Asn Ser Ala Thr Val Ala  
Page 551

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55

60

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 Gln Thr Lys Ile Thr Thr Glu Ala Ser Ala Gly Val Glu Thr Thr Pro  
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 260 265 270  
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 275 280 285  
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047-E2F-PCT.ST25.txt

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Lys Ser His Pro Leu Val Ala Ser Asp Lys Arg Lys Leu Pro Ala Asn  
370 375 380

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420 425 430

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465 470 475 480

Gly Asn Val Thr Ser Phe Trp Met Asp His Ile Lys Thr His Cys Tyr  
485 490 495

Val Ser Tyr Pro Ser Val Glu Glu Ala Ala Thr Arg Glu Ala Val  
500 505 510

Tyr Asn Leu Gln Trp Pro Pro Asn Gly Gly Arg His Leu Ile Ala Glu  
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Phe Val Arg Ala Glu Glu Val Lys Glu Lys Leu Glu Ala Pro Leu Pro  
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Pro Gln Pro Gln His Gln Pro Gln Ala Gln Thr Leu Ser Arg Pro Pro  
545 550 555 560

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Pro Thr Ala Leu Pro Pro Pro Pro Leu Ala Lys Pro Pro His Val  
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<213> Arabidopsis thaliana

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## 047-E2F-PCT.ST25.txt

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&lt;210&gt; 352

&lt;211&gt; 1055

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 352

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Glu Thr Ser Pro Arg Lys Asp Ala Gly Lys Ser Lys Lys Asn Lys Leu
20      25      30

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```

Arg Lys Lys Lys Leu Ser Asp Lys Leu Gly Pro Gln Trp Thr Arg Leu
35      40      45

```

```

Glu Leu Glu Arg Phe Tyr Asp Ala Tyr Arg Lys His Gly Gln Glu Trp
50      55      60

```

```

Arg Arg Val Ala Ala Ala Ile Arg Asn Ser Arg Ser Val Asp Met Val
65      70      75      80

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```

Glu Ala Leu Phe Asn Met Asn Arg Ala Tyr Leu Ser Leu Pro Glu Gly
85      90      95

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```

Thr Ala Ser Val Ala Gly Leu Ile Ala Met Met Thr Asp His Tyr Ser
100     105     110

```

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Val Met Glu Gly Ser Gly Ser Glu Gly Glu Gly His Asp Ala Ser Glu
115     120     125

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Val Pro Arg Lys Gln Gln Lys Arg Lys Arg Ala Lys Pro Gln Arg Ser
130     135     140

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Asp Ser Pro Glu Glu Val Asp Ile Gln Gln Ser Ile Gly Ser Pro Asp
145     150     155     160

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Gly Cys Leu Thr Phe Leu Lys Gln Ala Arg Ala Asn Val His Val Gly  
165 175

Thr Gln Arg His Ala Thr Gly Lys Arg Thr Pro Arg Val Pro Val Gln  
180 185 190

Thr Ser Phe Met Arg Asp Asp Arg Glu Gly Ser Thr Pro Pro Asn Lys  
195 200 205

Arg Ala Arg Lys Gln Phe Asp Ala Asn Asp Asp Val Ala His Phe Leu  
210 215 220

Ala Leu Ala Leu Thr Asp Ala Ser Arg Arg Gly Gly Ser Pro Lys Val  
225 230 235 240

Ser Glu Ser Pro Asn Arg Arg Thr Glu Leu Ser Asp Ser Ser Pro Ile  
245 250 255

Lys Ser Trp Gly Lys Met Ser Arg Thr Arg Lys Ser Gln Ser Lys His  
260 265 270

Cys Gly Ser Ser Ile Phe Glu Glu Trp Met Glu Ser Ser Arg Glu Arg  
275 280 285

Lys Leu Asp Ser Asp Lys Asp Thr Thr Leu Leu Met Asp Met Glu Arg  
290 295 300

Ala Gly Glu Met Glu Ala Pro Arg Lys Gly Lys Arg Val Tyr Lys Lys  
305 310 315 320

Arg Val Lys Val Glu Glu Ala Glu Cys Asn Asp Ser Asp Asp Asn Gly  
325 330 335

Glu Ala Cys Ser Ala Thr Gln Gly Leu Arg Ser Lys Ser Gln Arg Arg  
340 345 350

Lys Ala Ala Ile Glu Ala Ser Arg Glu Lys Tyr Ser Pro Arg Ser Pro  
355 360 365

Lys Lys Arg Asp Asp Lys His Thr Ser Gly Ala Phe Asp Ala Leu Gln  
370 375 380

Ala Leu Ala Glu Leu Ser Ala Ser Met Leu Pro Ala Asn Leu Met Glu  
385 390 395 400

Ser Glu Leu Ser Ala Gln Leu Lys Glu Glu Arg Thr Glu Tyr Asp Met

Asp Glu Lys Ser Ser Thr Pro Glu Ala Thr Ser Thr Ser Ser His Gly  
420 425 430

Glu Lys Ala Asn Val Glu Pro Asp Asp Ser Leu Leu His Ala Ile Ser  
435 440 445

Ser Val Glu Asn Ala Asn Lys Arg Lys Ser Lys Pro Ser Arg Leu Val  
450 455 460

Ser Thr Asp Cys Asp Asp Val Pro Thr Gly Lys Leu Gln Pro Gln Thr  
465 470 475 480

Ser Gly Ser Leu Arg Lys Arg Lys Pro Lys Val Leu Gly Asp Glu Ala  
485 490 495

Pro Ala Glu Phe Ser Gln Asn Lys Ser Ile Asn Lys Lys Glu Leu Pro  
500 505 510

Gln Asp Glu Asn Asn Met Lys Ser Leu Val Lys Thr Lys Arg Ala Gly  
515 520 525

Gln Val Pro Ala Gln Ser Lys Gln Met Lys Thr Val Lys Ala Leu Glu  
530 535 540

Glu Ser Ala Ile Thr Ser Asp Lys Lys Arg Pro Gly Met Asp Ile Val  
545 550 555 560

Ala Ser Pro Lys Gln Val Ser Asp Ser Gly Pro Thr Ser Leu Ser Gln  
565 570 575

Lys Pro Pro Asn Arg Arg Lys Lys Ser Leu Gln Lys Ser Leu Gln Glu  
580 585 590

Lys Ala Lys Ser Ser Glu Thr Thr His Lys Ala Ala Arg Ser Ser Arg  
595 600 605

Ser Leu Ser Glu Gln Glu Leu Leu Leu Lys Asp Lys Leu Ala Thr Ser  
610 615 620

Leu Ser Phe Pro Phe Ala Arg Arg Arg Cys Ile Phe Glu Trp Phe Tyr  
625 630 635 640

Ser Ala Ile Asp His Pro Trp Phe Ser Lys Met Glu Phe Val Asp Tyr  
645 650 655

Leu Asn His Val Gly Leu Gly His Ile Pro Arg Leu Thr Arg Leu Glu  
 660 665 670  
 Trp Ser Val Ile Lys Ser Ser Leu Gly Arg Pro Arg Arg Phe Ser Glu  
 675 680 685  
 Arg Phe Leu His Glu Glu Arg Glu Lys Leu Lys Gln Tyr Arg Glu Ser  
 690 695 700  
 Val Arg Lys His Tyr Thr Glu Leu Arg Thr Gly Ala Arg Glu Gly Leu  
 705 710 715 720  
 Pro Thr Asp Leu Ala Arg Pro Leu Ala Val Gly Asn Arg Val Ile Ala  
 725 730 735  
 Ile His Pro Lys Thr Arg Glu Ile His Asp Gly Lys Ile Leu Thr Val  
 740 745 750  
 Asp His Asn Lys Cys Asn Val Leu Phe Asp Asp Leu Gly Val Glu Leu  
 755 760 765  
 Val Met Asp Ile Asp Cys Met Pro Leu Asn Pro Leu Glu Tyr Met Pro  
 770 775 780  
 Glu Gly Leu Arg Arg Gln Ile Asp Lys Cys Leu Ser Met Lys Lys Glu  
 785 790 795 800  
 Ala Gln Leu Ser Gly Asn Thr Asn Leu Gly Val Ser Val Leu Phe Pro  
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 Pro Cys Gly Leu Glu Asn Val Ser Phe Ser Met Asn Pro Pro Leu Asn  
 820 825 830  
 Gln Gly Asp Met Ile Ala Pro Ile Leu His Gly Lys Val Ser Ser Asn  
 835 840 845  
 Thr Ser Ser Pro Arg Gln Thr Asn His Ser Tyr Ile Thr Thr Tyr Asn  
 850 855 860  
 Lys Ala Lys Glu Ala Glu Ile Gln Arg Ala Gln Ala Leu Gln His Ala  
 865 870 875 880  
 Leu Asp Glu Lys Glu Met Glu Pro Glu Met Leu Glu Ile Val Lys Gly  
 885 890 895  
 Ser Lys Thr Arg Ala Gln Ala Met Val Asp Ala Ala Ile Lys Ala Ala  
 900 905 910

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Ser Ser Val Lys Glu Gly Glu Asp Val Asn Thr Met Ile Gln Glu Ala  
915 920 925

Leu Glu Leu Val Gly Lys Asn Gln Leu Leu Arg Ser Ser Met Val Lys  
930 935 940

His His Glu His Val Asn Gly Ser Ile Glu His His Asn Pro Ser  
945 950 955 960

Pro Ser Asn Gly Ser Glu Pro Val Ala Asn Asn Asp Leu Asn Ser Gln  
965 970 975

Asp Gly Ser Glu Lys Asn Ala Gln Met Pro Ser Glu Leu Ile Thr Ser  
980 985 990

Cys Val Ala Thr Trp Leu Met Ile Gln Met Cys Thr Glu Arg Gln Tyr  
995 1000 1005

Pro Pro Ala Asp Val Ala Gln Leu Ile Asp Ala Ala Val Thr Ser  
1010 1015 1020

Leu Gln Pro Arg Cys Pro Gln Asn Leu Pro Ile Tyr Arg Glu Ile  
1025 1030 1035

Gln Thr Cys Met Gly Arg Ile Lys Thr Gln Ile Met Ser Leu Val  
1040 1045 1050

Pro Thr  
1055

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<211> 1053

<212> DNA

<213> Arabidopsis thaliana

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tacatggaag atgaaagga tgcggaagat gccatccgag cacttgaccg ctttgaattt 180  
gggcgtaaag gacgcagact tcgtgttgaa tggacaaaga gtgaacgtgg aggtgataaa 240  
agatctgggtg gtgggtcaaag gagatcctca tccagcatga gaccttccaa gactctcttt 300  
gtgattaact ttgatgcgga taatactagg acccgggata tagagaaaca ctttgagccg 360

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atctcgggtg agtatgctgt gaaggatgat gatgctagag gaaatggaca cagtcctgaa	540
agacgccgtg ataggtcacc tgaagaggaga aggcgatcac ctagtcccta caaagagaaa	600
agaggaagcc ctgattatgg ccgaggagct agtcctgttg ctgcctacag aaagaaaagg	660
accagtcctg actatggctg aagacgtagc ccaagtcctt acaagaaatc aagcgtggc	720
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cacagcccgt tcaagaagga gagtccgaga aatgggggtg gtgaagttga aagtcctatt	900
gaaaggagag agagatcgag gtctagcccc gagaatggcc aagttgaaag ccctgggtca	960
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<210> 354

<211> 350

<212> PRT

<213> Arabidopsis thaliana

<400> 354

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Asp	Leu	Glu	Arg	Leu	Phe	Arg	Lys	Tyr	Gly	Lys	Val	Glu	Arg	Val	Asp
			20					25					30		

Met	Lys	Ala	Gly	Phe	Ala	Phe	Val	Tyr	Met	Glu	Asp	Glu	Arg	Asp	Ala
		35				40						45			

Glu	Asp	Ala	Ile	Arg	Ala	Leu	Asp	Arg	Phe	Glu	Phe	Gly	Arg	Lys	Gly
	50					55					60				

Arg	Arg	Leu	Arg	Val	Glu	Trp	Thr	Lys	Ser	Glu	Arg	Gly	Gly	Asp	Lys
65					70					75				80	

Arg	Ser	Gly	Gly	Gly	Ser	Arg	Arg	Ser	Ser	Ser	Met	Arg	Pro	Ser	
			85					90				95			

Lys	Thr	Leu	Phe	Val	Ile	Asn	Phe	Asp	Ala	Asp	Asn	Thr	Arg	Thr	Arg

Asp Leu Glu Lys His Phe Glu Pro Tyr Gly Lys Ile Val Asn Val Arg  
 115 120 125  
 Ile Arg Arg Asn Phe Ala Phe Ile Gln Tyr Glu Ala Gln Glu Asp Ala  
 130 135 140  
 Thr Arg Ala Leu Asp Ala Ser Asn Asn Ser Lys Leu Met Asp Lys Val  
 145 150 155 160  
 Ile Ser Val Glu Tyr Ala Val Lys Asp Asp Ala Arg Gly Asn Gly  
 165 170 175  
 His Ser Pro Glu Arg Arg Arg Asp Arg Ser Pro Glu Arg Arg Arg  
 180 185 190  
 Ser Pro Ser Pro Tyr Lys Arg Glu Arg Gly Ser Pro Asp Tyr Gly Arg  
 195 200 205  
 Gly Ala Ser Pro Val Ala Ala Tyr Arg Lys Glu Arg Thr Ser Pro Asp  
 210 215 220  
 Tyr Gly Arg Arg Arg Ser Pro Ser Pro Tyr Lys Lys Ser Arg Arg Gly  
 225 230 235 240  
 Ser Pro Glu Tyr Gly Arg Asp Arg Arg Gly Asn Asp Ser Pro Arg Arg  
 245 250 255  
 Arg Glu Arg Val Ala Ser Pro Thr Lys Tyr Ser Arg Ser Pro Asn Asn  
 260 265 270  
 Lys Arg Glu Arg Met Ser Pro Asn His Ser Pro Phe Lys Lys Glu Ser  
 275 280 285  
 Pro Arg Asn Gly Val Gly Glu Val Glu Ser Pro Ile Glu Arg Arg Glu  
 290 295 300  
 Arg Ser Arg Ser Ser Pro Glu Asn Gly Gln Val Glu Ser Pro Gly Ser  
 305 310 315 320  
 Ile Gly Arg Arg Asp Ser Asp Gly Gly Tyr Asp Gly Ala Glu Ser Pro  
 325 330 335  
 Met Gln Lys Ser Arg Ser Pro Arg Ser Pro Pro Ala Asp Glu  
 340 345 350



&lt;210&gt; 355

&lt;211&gt; 1518

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 355

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tacatggcta aagaaatcaa aactggtgaa attgtggctc tcaaaaagat acgtatggac      180
aatgaagag aaggggtttcc tataacagct attagagaga taaagattct gaagaagctt      240
catcatgaaa atgtcattca gctgaaagag attgtgactt caccaggctg ggacagggat      300
gaccaaggaa agccagataa taacaaatc aaggggtgca tctacatggt ttttgagtac      360
atggatcatg atttactggt actagcagat cgtcctggac tgagatttac tgttctcaa      420
attaagtgtt acatgaagca attgcttacc gggcttctact attgtcatgt gaatcaagtg      480
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gctgattttg ggcctgcacg gtcgtattct catgatcata ctggaaatct tacaatcgt      600
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cggcccttga agaggcgtgt aagagagttc ttcagacact ttgatcgcca tgctcttgaa      900
ttactggaga aaatgttggg gcttgatcca gcacagagaa tatcggcgaa ggatgctctt      960
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1518

&lt;210&gt; 356

&lt;211&gt; 505

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 356

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Ile Trp Gly Ser Arg Ser Val Asp Cys Phe Glu Lys Leu Glu Gln Ile  
 20 25 30

Gly Glu Gly Thr Tyr Gly Gln Val Tyr Met Ala Lys Glu Ile Lys Thr  
 35 40 45

Gly Glu Ile Val Ala Leu Lys Lys Ile Arg Met Asp Asn Glu Arg Glu  
 50 55 60

Gly Phe Pro Ile Thr Ala Ile Arg Glu Ile Lys Ile Leu Lys Lys Leu  
 65 70 75 80

His His Glu Asn Val Ile Gln Leu Lys Glu Ile Val Thr Ser Pro Gly  
 85 90 95

Arg Asp Arg Asp Asp Gln Gly Lys Pro Asp Asn Asn Lys Tyr Lys Gly  
 100 105 110

Gly Ile Tyr Met Val Phe Glu Tyr Met Asp His Asp Leu Thr Gly Leu  
 115 120 125

Ala Asp Arg Pro Gly Leu Arg Phe Thr Val Pro Gln Ile Lys Cys Tyr  
 130 135 140

Met Lys Gln Leu Leu Thr Gly Leu His Tyr Cys His Val Asn Gln Val  
 145 150 155 160

Leu His Arg Asp Ile Lys Gly Ser Asn Leu Leu Ile Asp Asn Glu Gly  
 165 170 175

Asn Leu Lys Leu Ala Asp Phe Gly Leu Ala Arg Ser Tyr Ser His Asp  
 180 185 190

His Thr Gly Asn Leu Thr Asn Arg Val Ile Thr Leu Trp Tyr Arg Pro  
 195 200 205

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Pro Glu Leu Leu Leu Gly Ala Thr Lys Tyr Gly Pro Ala Ile Asp Met  
 210 215 220  
 Trp Ser Val Gly Cys Ile Phe Ala Glu Leu Leu His Ala Lys Pro Ile  
 225 230 235 240  
 Leu Pro Gly Lys Asn Glu Gln Glu Gln Leu Asn Lys Ile Phe Glu Leu  
 245 250 255  
 Cys Gly Ser Pro Asp Glu Lys Leu Trp Pro Gly Val Ser Lys Met Pro  
 260 265 270  
 Trp Phe Asn Asn Phe Lys Pro Ala Arg Pro Leu Lys Arg Arg Val Arg  
 275 280 285  
 Glu Phe Phe Arg His Phe Asp Arg His Ala Leu Glu Leu Leu Glu Lys  
 290 295 300  
 Met Leu Val Leu Asp Pro Ala Gln Arg Ile Ser Ala Lys Asp Ala Leu  
 305 310 315 320  
 Asp Ala Glu Tyr Phe Trp Thr Asp Pro Leu Pro Cys Asp Pro Lys Ser  
 325 330 335  
 Leu Pro Thr Tyr Glu Ser Ser His Glu Phe Gln Thr Lys Lys Lys Arg  
 340 345 350  
 Gln Gln Gln Arg Gln Asn Glu Glu Ala Ala Lys Arg Gln Lys Leu Gln  
 355 360 365  
 His Pro Pro Leu Gln His Ser Arg Leu Pro Pro Leu Gln His Gly Gly  
 370 375 380  
 Gln Ser His Ala Ala Pro His Trp Pro Ala Gly Pro Asn His Pro Thr  
 385 390 395 400  
 Asn Asn Ala Pro Pro Gln Val Pro Ala Gly Pro Ser His Asn Phe Tyr  
 405 410 415  
 Gly Lys Pro Arg Gly Pro Pro Gly Pro Asn Arg Tyr Pro Pro Ser Gly  
 420 425 430  
 Asn Gln Ser Gly Gly Tyr Asn Gln Ser Arg Gly Gly Tyr Ser Ser Gly  
 435 440 445  
 Ser Tyr Pro Pro Gln Gly Arg Gly Ala Pro Tyr Val Ala Gly Pro Arg  
 450 455 460 465 470 475 480 485 490 495 500 505 510 515 520 525 530 535 540 545 550 555 560 565

450

455

Gly Pro Ser Gly Gly Pro Tyr Gly Val Gly Pro Pro Asn Tyr Thr Gln  
465 470 475 480

Gly Gly Gln Tyr Gly Gly Ser Gly Ser Ser Gly Arg Gly Gln Asn Gln  
485 490 495

Arg Asn Gln Gln Tyr Gly Trp Gln Gln  
500 505

&lt;210&gt; 357

&lt;211&gt; 1617

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

<400> 357  
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 ggaggtgaa gacctcttaa gcttatcggt ttgaatgac caacaggctg tgagatcgag 180  
 tctaaataca cgttggggag agagctaggt cgtggagaat tcggtgttac gtatctatgt 240  
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 catcctaatt ttgttacttt gaaggagact tatgaggatg agcatgctgt tcatttggtt 420  
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 gagagagctg ctgctgctgt cactaagacc atcatggaag ttgttcagggt gtgtcataag 540  
 catggggtaa tgcacaggga cctgaaacct gagaactctt tgtttgaaa caagaaggag 600  
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 ttacagaatg caaagacag ccccaatgta tcattgggtg aaacagttag gccaagggtg 1020  
 aagcagttca ccgtcatgaa caagctcaag aaacgagcac tcagggttat tgctgagcat 1080  
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<212> PRT

<213> Arabidopsis thaliana

<400> 358

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 35 40 45

Ile Val Leu Asn Asp Pro Thr Gly Arg Glu Ile Glu Ser Lys Tyr Thr  
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Leu Gly Arg Glu Leu Gly Arg Gly Glu Phe Gly Val Thr Tyr Leu Cys  
 65 70 75 80

Thr Asp Lys Glu Thr Asp Asp Val Phe Ala Cys Lys Ser Ile Leu Lys  
 85 90 95

Lys Lys Leu Arg Thr Ala Val Asp Ile Glu Asp Val Arg Arg Glu Val  
 100 105 110

Glu Ile Met Arg His Met Pro Glu His Pro Asn Val Val Thr Leu Lys  
 115 120 125

Glu Thr Tyr Glu Asp Glu His Ala Val His Leu Val Met Glu Leu Cys  
 Page 567

130

135

Glu Gly Gly Glu Leu Phe Asp Arg Ile Val Ala Arg Gly His Tyr Thr  
145 150 155 160

Glu Arg Ala Ala Ala Ala Val Thr Lys Thr Ile Met Glu Val Val Gln  
165 170 175

Val Cys His Lys His Gly Val Met His Arg Asp Leu Lys Pro Glu Asn  
180 185 190

Phe Leu Phe Gly Asn Lys Lys Glu Thr Ala Pro Leu Lys Ala Ile Asp  
195 200 205

Phe Gly Leu Ser Val Phe Phe Lys Pro Gly Glu Arg Phe Asn Glu Ile  
210 215 220

Val Gly Ser Pro Tyr Tyr Met Ala Pro Glu Val Leu Lys Arg Asn Tyr  
225 230 235 240

Gly Pro Glu Val Asp Ile Trp Ser Ala Gly Val Ile Leu Tyr Ile Leu  
245 250 255

Leu Cys Gly Val Pro Pro Phe Trp Ala Glu Thr Glu Gln Gly Val Ala  
260 265 270

Gln Ala Ile Ile Arg Ser Val Leu Asp Phe Arg Arg Asp Pro Trp Pro  
275 280 285

Lys Val Ser Glu Asn Ala Lys Asp Leu Ile Arg Lys Met Leu Asp Pro  
290 295 300

Asp Gln Lys Arg Arg Leu Thr Ala Gln Gln Val Leu Asp His Pro Trp  
305 310 315 320

Leu Gln Asn Ala Lys Thr Ala Pro Asn Val Ser Leu Gly Glu Thr Val  
325 330 335

Arg Ala Arg Leu Lys Gln Phe Thr Val Met Asn Lys Leu Lys Lys Arg  
340 345 350

Ala Leu Arg Val Ile Ala Glu His Leu Ser Asp Glu Glu Ala Ser Gly  
355 360 365

Ile Arg Glu Gly Phe Gln Ile Met Asp Thr Ser Gln Arg Gly Lys Ile  
370 375 380

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Asn Ile Asp Glu Leu Lys Ile Gly Leu Gln Lys Leu Gly His Ala Ile  
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Asp Gly Tyr Leu Asp Cys Asp Glu Phe Ile Ala Ile Ser Val His Leu  
420 425 430

Arg Lys Met Gly Asn Asp Glu His Leu Lys Lys Ala Phe Ala Phe Phe  
435 440 445

Asp Gln Asn Asn Asn Gly Tyr Ile Glu Ile Glu Glu Leu Arg Glu Ala  
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Leu Ser Asp Glu Leu Gly Thr Ser Glu Glu Val Val Asp Ala Ile Ile  
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Arg Asp Val Asp Thr Asp Lys Asp Gly Arg Ile Ser Tyr Glu Glu Phe  
485 490 495

Val Thr Met Met Lys Thr Gly Thr Asp Trp Arg Lys Ala Ser Arg Gln  
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Tyr Ser Arg Glu Arg Phe Asn Ser Ile Ser Leu Lys Leu Met Gln Asp  
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<213> Arabidopsis thaliana

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&lt;211&gt; 318

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 360

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20 25 30

Thr Arg Pro Gly Ser Gly Lys Gln Val His Leu Ser Glu Gly Glu Ile  
35 40 45

Arg Gln Leu Cys Ala Val Ser Lys Glu Ile Phe Leu Gln Gln Pro Asn  
50 55 60

Leu Leu Glu Leu Glu Ala Pro Ile Lys Ile Cys Gly Asp Ile His Gly  
65 70 75 80

Gln Tyr Ser Asp Leu Leu Arg Leu Phe Glu Tyr Gly Gly Phe Pro Pro  
85 90 95

Glu Ala Asn Tyr Leu Phe Leu Gly Asp Tyr Val Asp Arg Gly Lys Gln  
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Ser Leu Glu Thr Ile Cys Leu Leu Ala Tyr Lys Ile Lys Tyr Pro  
115 120 125



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Glu Asn Phe Phe Leu Leu Arg Gly Asn His Glu Ser Ala Ser Ile Asn  
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Arg Ile Tyr Gly Phe Tyr Asp Glu Cys Lys Arg Arg Phe Asn Val Arg  
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Leu Trp Lys Ile Phe Thr Asp Cys Phe Asn Cys Leu Pro Val Ala Ala  
165 170 175

Leu Ile Asp Asp Arg Ile Leu Cys Met His Gly Gly Ile Ser Pro Glu  
180 185 190

Leu Lys Ser Leu Asp Gln Ile Arg Asn Ile Ala Arg Pro Met Asp Ile  
195 200 205

Pro Glu Ser Gly Leu Val Cys Asp Leu Leu Trp Ser Asp Pro Ser Gly  
210 215 220

Asp Val Gly Trp Gly Met Asn Asp Arg Gly Val Ser Tyr Thr Phe Gly  
225 230 235 240

Ala Asp Lys Val Ala Glu Phe Leu Glu Lys His Asp Met Asp Leu Ile  
245 250 255

Cys Arg Ala His Gln Val Val Glu Asp Gly Tyr Glu Phe Phe Ala Glu  
260 265 270

Arg Gln Leu Val Thr Val Phe Ser Ala Pro Asn Tyr Cys Gly Glu Phe  
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<213> Arabidopsis thaliana

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Leu	Glu	Arg	Glu	Lys	Gly	Ile	Thr	Ile	Gln	Ser	Ala	Ala	Thr	Tyr	Cys
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Thr	Trp	Lys	Asp	Tyr	Lys	Val	Asn	Ile	Ile	Asp	Thr	Pro	Gly	His	Val
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Ile Leu Val Leu Cys Ser Val Gly Gly Val Gln Ser Ile Thr  
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Val Asp Arg Gln Met Arg Arg Tyr Glu Val Pro Arg Val Ala Phe Ile  
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195 200 205

Ala Arg Ala Lys Leu Arg His His Ser Ala Ala Val Gln Val Pro Ile  
210 215 220

Gly Leu Glu Glu Asn Phe Gln Gly Leu Ile Asp Leu Ile His Val Lys  
225 230 235 240

Ala Tyr Phe Phe His Gly Ser Ser Gly Glu Asn Val Val Ala Gly Asp  
245 250 255

Ile Pro Ala Asp Met Glu Gly Leu Val Gly Asp Lys Arg Arg Glu Leu  
260 265 270

Ile Glu Thr Val Ser Glu Val Asp Asp Val Leu Ala Glu Lys Phe Leu  
275 280 285

Asn Asp Glu Pro Val Ser Ala Ala Glu Leu Glu Glu Ala Ile Arg Arg  
290 295 300

Ala Thr Ile Ala Gln Lys Phe Val Pro Val Phe Met Gly Ser Ala Phe  
305 310 315 320

Lys Asn Lys Gly Val Gln Pro Leu Leu Asp Gly Val Val Ser Phe Leu  
325 330 335

Pro Ser Pro Asn Glu Val Asn Asn Tyr Ala Leu Asp Gln Asn Asn Asn  
340 345 350

Glu Glu Arg Val Thr Leu Thr Gly Ser Pro Asp Gly Pro Leu Val Ala  
355 360 365

Leu Ala Phe Lys Leu Glu Glu Gly Arg Phe Gly Gln Leu Thr Tyr Leu  
370 375 380

Arg Val Tyr Glu Gly Val Ile Lys Lys Gly Asp Phe Ile Ile Asn Val  
385 390 395 400

Asn Thr Gly Lys Arg Ile Lys Val Pro Arg Leu Val Arg Met His Ser  
405 410 415

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 Val Phe Gly Ile Glu Cys Ala Ser Gly Asp Thr Phe Thr Asp Gly Ser  
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 Val Lys Tyr Thr Met Thr Ser Met Asn Val Pro Glu Pro Val Met Ser  
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 465 470 475 480  
 Ala Leu Asn Arg Phe Gln Lys Glu Asp Pro Thr Phe Arg Val Gly Leu  
 485 490 495  
 Asp Pro Glu Ser Gly Gln Thr Ile Ile Ser Gly Met Gly Glu Leu His  
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 Leu Asp Ile Tyr Val Glu Arg Met Arg Arg Glu Tyr Lys Val Asp Ala  
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 Ala Glu Phe Asp Tyr Leu His Lys Lys Gln Ser Gly Gly Ala Gly Gln  
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 Tyr Gly Arg Val Thr Gly Tyr Val Glu Pro Leu Pro Pro Gly Ser Lys  
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 Glu Lys Phe Glu Phe Glu Asn Met Ile Val Gly Gln Ala Ile Pro Ser  
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 Gly Phe Ile Pro Ala Ile Glu Lys Gly Phe Lys Glu Ala Ala Asn Ser  
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 625 630 635 640  
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 Ile Leu Glu Pro Val Met Leu Val Glu Leu Lys Val Pro Thr Glu Phe  
 Page 575

Gln Gly Thr Val Ala Gly Asp Ile Asn Lys Arg Lys Gly Ile Ile Val  
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Gly Asn Asp Gln Glu Gly Asp Asp Ser Val Ile Thr Ala Asn Val Pro  
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Leu Asn Asn Met Phe Gly Tyr Ser Thr Ser Leu Arg Ser Met Thr Gln  
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Gly Lys Gly Glu Phe Thr Met Glu Tyr Lys Glu His Ser Ala Val Ser  
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<211> 2103

<212> DNA

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<211> 700

<212> PRT

<213> Arabidopsis thaliana

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50 55 60

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65 70 75 80

Pro Glu Ile Gly Thr Leu His Asp Asn Phe Val His Ala Val Glu Thr  
85 90 95

Tyr Ala Glu Asn Lys Tyr Leu Gly Thr Arg Val Arg Ser Asp Gly Thr  
100 105 110

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Gln Ala Ile Gly Ser Gly Leu Leu Phe His Gly Val Asn Gln Gly Asp  
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Cys Val Gly Leu Tyr Phe Ile Asn Arg Pro Glu Trp Leu Val Val Asp  
145 150 155 160

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165 170 175

Leu Gly Pro Asp Ala Val Lys Phe Val Val Asn His Ala Asn Leu Gln  
180 185 190

Ala Ile Phe Cys Val Pro Gln Thr Leu Asn Ile Leu Leu Ser Phe Leu  
195 200 205

Ala Glu Ile Pro Ser Ile Arg Leu Ile Val Val Val Gly Gly Ala Asp  
210 215 220

Glu His Leu Pro Ser Leu Pro Arg Gly Thr Gly Val Thr Ile Val Ser  
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Tyr Gln Lys Leu Leu Ser Gln Gly Arg Ser Ser Leu His Pro Phe Ser  
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Pro Pro Lys Pro Glu Asp Ile Ala Thr Ile Cys Tyr Thr Ser Gly Thr  
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 Cys Ser Val Pro Arg Leu Tyr Asn Arg Ile Tyr Asp Gly Ile Thr Ser  
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 Gly Met Thr Glu Thr Ser Cys Val Ile Ser Ala Met Asp Asp Gly Asp  
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 Asn Leu Ser Gly His Val Gly Ser Pro Asn Pro Ala Cys Glu Val Lys  
 465 470 475 480  
 Leu Val Asp Val Pro Glu Met Asn Tyr Thr Ser Asp Asp Gln Pro Tyr  
 485 490 495  
 Pro Arg Gly Glu Ile Cys Val Arg Gly Pro Ile Ile Phe Lys Gly Tyr  
 500 505 510  
 Tyr Lys Asp Glu Glu Gln Thr Arg Glu Ile Leu Asp Gly Asp Gly Trp  
 Page 579

Leu His Thr Gly Asp Ile Gly Leu Trp Leu Pro Gly Gly Arg Leu Lys  
530 535 540

Ile Ile Asp Arg Lys Lys Asn Ile Phe Lys Leu Ala Gln Gly Glu Tyr  
545 550 555 560

Ile Ala Pro Glu Lys Ile Glu Asn Val Tyr Thr Lys Cys Arg Phe Val  
565 570 575

Ser Gln Cys Phe Ile His Gly Asp Ser Phe Asn Ser Ser Leu Val Ala  
580 585 590

Ile Val Ser Val Asp Pro Glu Val Met Lys Asp Trp Ala Ala Ser Glu  
595 600 605

Gly Ile Lys Tyr Glu His Leu Gly Gln Leu Cys Asn Asp Pro Arg Val  
610 615 620

Arg Lys Thr Val Leu Ala Glu Met Asp Asp Leu Gly Arg Glu Ala Gln  
625 630 635 640

Leu Arg Gly Phe Glu Phe Ala Lys Ala Val Thr Leu Val Pro Glu Pro  
645 650 655

Phe Thr Leu Glu Asn Gly Leu Leu Thr Pro Thr Phe Lys Ile Lys Arg  
660 665 670

Pro Gln Ala Lys Ala Tyr Phe Ala Glu Ala Ile Ser Lys Met Tyr Ala  
675 680 685

Glu Ile Ala Ala Ser Asn Pro Ile Pro Ser Lys Leu  
690 695 700

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<211> 924

<212> DNA

<213> Arabidopsis thaliana

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<210> 366

<211> 307

<212> PRT

<213> Arabidopsis thaliana

<400> 366

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20 25 30

Ala His Glu Asp Ala Gly Ser Ser Gly Val Arg Ala Leu Ala Leu Leu  
35 40 45

Gly Ala Gly Val Thr Gly Leu Leu Ser Phe Ser Thr Val Ala Ser Ala  
50 55 60

Asp Glu Ala Glu His Gly Leu Glu Ser Pro Glu Tyr Pro Trp Pro His  
65 70 75 80

Asp Gly Ile Leu Ser Ser Tyr Asp His Ala Ser Ile Arg Arg Gly His  
85 90 95

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Gln Val Tyr Gln Gln Val Cys Ala Ser Cys His Ser Met Ser Leu Ile  
100 105 110

Ser Tyr Arg Asp Leu Val Gly Val Ala Tyr Thr Glu Glu Glu Ala Lys  
115 120 125

Ala Met Ala Ala Glu Ile Glu Val Val Asp Gly Pro Asn Asp Glu Gly  
130 135 140

Glu Met Phe Thr Arg Pro Gly Lys Leu Ser Asp Arg Phe Pro Gln Pro  
145 150 155 160

Tyr Ala Asn Glu Ser Ala Ala Arg Phe Ala Asn Gly Gly Ala Tyr Pro  
165 170 175

Pro Asp Leu Ser Leu Ile Thr Lys Ala Arg His Asn Gly Pro Asn Tyr  
180 185 190

Val Phe Ala Leu Leu Thr Gly Tyr Arg Asp Pro Pro Ala Gly Ile Ser  
195 200 205

Ile Arg Glu Gly Leu His Tyr Asn Pro Tyr Phe Pro Gly Gly Ala Ile  
210 215 220

Ala Met Pro Lys Met Leu Asn Asp Glu Ala Val Glu Tyr Glu Asp Gly  
225 230 235 240

Val Pro Ala Thr Glu Ala Gln Met Gly Lys Asp Ile Val Ser Phe Leu  
245 250 255

Ala Trp Ala Ala Glu Pro Glu Met Glu Glu Arg Lys Leu Met Gly Phe  
260 265 270

Lys Trp Ile Phe Leu Leu Ser Leu Ala Leu Leu Gln Ala Ala Tyr Tyr  
275 280 285

Arg Arg Leu Lys Trp Ser Val Leu Lys Ser Arg Lys Leu Val Leu Asp  
290 295 300

Val Val Asn  
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<210> 367

<211> 1743

<212> DNA

<213> *Arabidopsis thaliana*

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cctgatgatt ttctcaattc tgaaggcgat aaaaatgact atgaatggct tctgacccct    240
ccaggtagcg ctctattttc atcgctggag atggaatcac ataggactat gatgagtcag    300
actggtgatt caaagagtcg cccggctaca ttgacttcca gactggcaaa ttcctcaaca    360
gagtctgctg caaggaacca tctaactctc agacaacaaa ctctctctcc tggattgagc    420
tcttccagtg gagcaagtcg aagaccttca tcatctggag gacctggatc aagacctgcc    480
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ctgtcaagat ctactgccag atcttcaaca ccaacttcaa gaccacact  tcctccatct    840
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aggacaacat taccgaaag gccactttca gcgacaagag gcagacctgg agctccaagc   1140
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tgttcccat  caagaggaag agcaccaatg tactctagtg gtatctctgt tcctcgggtt   1260
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aacgcaagct cagagatcag tgtctgcaac aacaatggca ttgtcttaga ggcaagtga   1680
aaggaagacg acgcaggcag cgagagaggt tgcagggtccc ctgcaagctt acaagggaga   1740

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tga

1743

&lt;210&gt; 368

&lt;211&gt; 580

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 368

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Arg Glu Lys Glu Gln Asp Asn Leu Leu Asn Asn Asn Pro Asp Glu  
 20 25 30

Phe Glu Thr Pro Leu Gly Ser Lys His Gly Thr Ser Pro Val Phe Asn  
 35 40 45

Ile Ser Ser Gly Ala Pro Pro Ser Arg Lys Ala Ala Pro Asp Asp Phe  
 50 55 60

Leu Asn Ser Glu Gly Asp Lys Asn Asp Tyr Glu Trp Leu Leu Thr Pro  
 65 70 75 80

Pro Gly Thr Pro Leu Phe Pro Ser Leu Glu Met Glu Ser His Arg Thr  
 85 90 95

Met Met Ser Gln Thr Gly Asp Ser Lys Ser Arg Pro Ala Thr Leu Thr  
 100 105 110

Ser Arg Leu Ala Asn Ser Ser Thr Glu Ser Ala Ala Arg Asn His Leu  
 115 120 125

Thr Ser Arg Gln Gln Thr Ser Ser Pro Gly Leu Ser Ser Ser Ser Gly  
 130 135 140

Ala Ser Arg Arg Pro Ser Ser Ser Gly Gly Pro Gly Ser Arg Pro Ala  
 145 150 155 160

Thr Pro Thr Gly Arg Ser Ser Thr Leu Thr Ala Asn Ser Lys Ser Ser  
 165 170 175

Arg Pro Ser Thr Pro Thr Ser Arg Ala Thr Val Ser Ser Ala Thr Arg  
 180 185 190

Pro Ser Leu Thr Asn Ser Arg Ser Thr Val Ser Ala Thr Thr Lys Pro  
 195 200 205  
 Thr Pro Met Ser Arg Ser Thr Ser Leu Ser Ser Ser Arg Leu Thr Pro  
 210 215 220  
 Thr Ala Ser Lys Pro Thr Thr Ser Thr Ala Arg Ser Ala Gly Ser Val  
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 Thr Arg Ser Thr Pro Ser Thr Thr Thr Lys Ser Ala Gly Pro Ser Arg  
 245 250 255  
 Ser Thr Thr Pro Leu Ser Arg Ser Thr Ala Arg Ser Ser Thr Pro Thr  
 260 265 270  
 Ser Arg Pro Thr Leu Pro Pro Ser Lys Thr Ile Ser Arg Ser Ser Thr  
 275 280 285  
 Pro Thr Arg Arg Pro Ile Ala Ser Ala Ser Ala Ala Thr Thr Thr Ala  
 290 295 300  
 Asn Pro Thr Ile Ser Gln Ile Lys Pro Ser Ser Pro Ala Pro Ala Lys  
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 Pro Met Pro Thr Pro Ser Lys Asn Pro Ala Leu Ser Arg Ala Ala Ser  
 325 330 335  
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 340 345 350  
 Ser Leu Glu Thr Pro Pro Asn Leu Arg Thr Thr Leu Pro Glu Arg Pro  
 355 360 365  
 Leu Ser Ala Thr Arg Gly Arg Pro Gly Ala Pro Ser Arg Ser Gly  
 370 375 380  
 Ser Val Glu Pro Gly Gly Pro Pro Gly Gly Arg Pro Arg Arg Gln Ser  
 385 390 395 400  
 Cys Ser Pro Ser Arg Gly Arg Ala Pro Met Tyr Ser Ser Gly Ser Ser  
 405 410 415  
 Val Pro Ala Val Asn Arg Gly Tyr Ser Lys Ala Ser Asp Asn Val Ser  
 420 425 430  
 Pro Val Met Met Gly Thr Lys Met Val Glu Arg Val Ile Asn Met Arg  
 435 440 445

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Lys Leu Ala Pro Pro Arg Ser Asp Asp Lys Gly Ser Pro His Gly Asn  
450 455 460

Leu Ser Ala Lys Ser Ser Ser Pro Asp Ser Ala Gly Phe Gly Arg Thr  
465 470 475 480

Leu Ser Lys Lys Ser Leu Asp Met Ala Ile Arg His Met Asp Ile Arg  
485 490 495

Arg Thr Ile Pro Gly Asn Leu Arg Pro Leu Met Thr Asn Ile Pro Ala  
500 505 510

Ser Ser Met Tyr Ser Val Arg Ser Gly His Thr Arg Gly Arg Pro Met  
515 520 525

Asn Val Ser Asp Ser Ser Pro Leu Ala Thr Ser Ser Asn Ala Ser Ser  
530 535 540

Glu Ile Ser Val Cys Asn Asn Asn Gly Ile Cys Leu Glu Ala Ser Glu  
545 550 555 560

Lys Glu Asp Asp Ala Gly Ser Glu Arg Gly Cys Arg Ser Pro Ala Ser  
565 570 575

Leu Gln Gly Arg  
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<211> 2646

<212> DNA

<213> Arabidopsis thaliana

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ccgccgactc caacacgagg caggccacaa ccagattttg acagaagctc gcttgcatat 2640
atctga 2646

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&lt;210&gt; 370

&lt;211&gt; 881

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 370

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Met Gly Ser Lys 5 Pro Trp Leu His Pro Ala Pro Gln Tyr Lys 15 Thr Leu
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Glu Thr Phe Trp 20 Asp Asp Glu Asp 25 Asp Ala Pro Gly Pro Arg 30 Cys Ala

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His Thr Leu 35 Thr Ala Val Ala 40 Ala Thr Lys Thr His 45 Gly Pro Arg Leu

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Ile Leu 50 Phe Gly Gly Ala 55 Thr Ala Ile Glu Gly 60 Gly Ser Ser Ser Val

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```

Pro Gly Ile Arg Leu 70 Ala Gly Val Thr Asn 75 Thr Val His Ser Tyr Asp 80
65

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Ile Leu Thr Arg 85 Lys Trp Thr Arg Leu 90 Lys Pro Ala Gly Glu 95 Pro Pro

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Ser Pro Arg Ala 100 Ala His Ala 105 Ala Ala Val Gly Thr Met 110 Val Val

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Phe Gln Gly 115 Gly Ile Gly Pro 120 Ala Gly His Ser Thr 125 Asp Asp Leu Tyr

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Val Leu 130 Asp Met Thr Asn 135 Asp Lys Phe Lys Trp 140 His Arg Val Val Val

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Gln Gly Asp Gly Pro 150 Gly Pro Arg Tyr Gly 155 His Val Met Asp Leu 160 Val
145

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Ser Gln Arg Tyr Leu Val Thr Val Thr Gly Asn Asp Gly Lys Arg Ala  
165 170 175

Leu Ser Asp Ala Trp Ala Leu Asp Thr Ala Gln Lys Pro Tyr Val Trp  
180 185 190

Gln Arg Leu Asn Pro Asp Gly Asp Arg Pro Ser Ala Arg Met Tyr Ala  
195 200 205

Ser Gly Ser Ala Arg Ser Asp Gly Met Phe Leu Leu Cys Gly Gly Arg  
210 215 220

Asp Thr Leu Gly Ala Pro Leu Gly Asp Ala Tyr Gly Leu Leu Met His  
225 230 235 240

Arg Asn Gly Gln Trp Glu Trp Thr Leu Ala Pro Gly Val Ala Pro Ser  
245 250 255

Pro Arg Tyr Gln His Ala Ala Val Phe Val Gly Ala Arg Leu His Val  
260 265 270

Ser Gly Gly Val Leu Arg Gly Gly Arg Val Ile Asp Ala Glu Ala Ser  
275 280 285

Val Ala Val Leu Asp Thr Ala Ala Gly Val Trp Leu Asp Arg Asn Gly  
290 295 300

Gln Val Thr Ser Ala Arg Gly Ser Lys Gly Gln Ile Asp Gln Asp Pro  
305 310 315 320

Ser Phe Glu Leu Met Arg Arg Cys Arg His Gly Ala Ala Ser Val Gly  
325 330 335

Ile Arg Ile Tyr Val His Gly Gly Leu Arg Gly Asp Val Leu Leu Asp  
340 345 350

Asp Phe Leu Val Ala Glu Asn Ser Thr Phe Gln Ser Asp Ile Ser Ser  
355 360 365

Pro Leu Leu Ala Ser Asp Arg Thr Gln Gln Ser Ser Thr Pro Arg Phe  
370 375 380

Ser Tyr Ala Ala Arg Pro Pro Ser Gly Ser Glu Pro Ser Phe Ser Met  
385 390 395 400

Ser Glu Gly Leu Ser Leu Asp Glu Asn Ser Leu Glu Lys Leu Thr Glu

Ala Ser Ala Ala Glu Ala Glu Val Ala Ser Ser Val Trp Arg Ala Ala  
420 425 430

Gln Leu Gly Ala Gly Thr Leu Asp Glu Glu Pro Ser Thr Ser Asp Ala  
435 440 445

Ser Ser Pro Ile Val Glu Ser Thr Thr Asp Gly Thr Ala Asn Glu Gly  
450 455 460

Asp Val Arg Leu His Pro Arg Ala Val Val Val Ala Lys Glu Thr Val  
465 470 475 480

Gly Ser Leu Gly Gly Met Val Arg Gln Leu Ser Leu Asp Gln Phe Gln  
485 490 495

Asn Glu Ser Arg Arg Met Val Pro Met Asn Asn Ser Asp Val Pro Gln  
500 505 510

Pro Thr Lys Lys Phe Thr Arg Gln Lys Ser Pro Gln Gly Leu His Lys  
515 520 525

Lys Val Ile Ala Ala Leu Leu Arg Pro Arg Asn Trp Lys Pro Pro Gly  
530 535 540

Asn Arg Lys Phe Phe Leu Asp Ser Tyr Glu Val Gly Glu Leu Cys Tyr  
545 550 555 560

Ala Ala Glu Gln Ile Phe Met His Glu Gln Thr Val Leu Gln Leu Lys  
565 570 575

Ala Pro Ile Lys Val Phe Gly Asp Leu His Gly Gln Phe Gly Asp Leu  
580 585 590

Met Arg Leu Phe Asp Glu Tyr Gly Phe Pro Ser Thr Ala Gly Asp Ile  
595 600 605

Thr Tyr Ile Asp Tyr Leu Phe Leu Gly Asp Tyr Val Asp Arg Gly Gln  
610 615 620

His Ser Leu Glu Thr Ile Thr Leu Leu Leu Ala Leu Lys Ile Glu Tyr  
625 630 635 640

Pro Glu Asn Val His Leu Ile Arg Gly Asn His Glu Ala Ala Asp Ile  
645 650 655

Asn Ala Leu Phe Gly Phe Arg Leu Glu Cys Ile Glu Arg Met Gly Glu  
660 665 670

Asn Asp Gly Ile Trp Ala Trp Thr Arg Phe Asn Gln Leu Phe Asn Tyr  
675 680 685

Leu Pro Leu Ala Ala Leu Ile Glu Asn Lys Ile Ile Cys Met His Gly  
690 695 700

Gly Ile Gly Arg Ser Ile Ser Thr Val Glu Gln Ile Glu Lys Ile Glu  
705 710 715 720

Arg Pro Ile Thr Met Asp Ala Gly Ser Leu Val Leu Met Asp Leu Leu  
725 730 735

Trp Ser Asp Pro Thr Glu Asn Asp Ser Ile Glu Gly Leu Arg Pro Asn  
740 745 750

Ala Arg Gly Pro Gly Leu Val Thr Phe Gly Pro Asp Arg Val Thr Glu  
755 760 765

Phe Cys Lys Arg Asn Lys Leu Gln Leu Ile Ile Arg Ala His Glu Cys  
770 775 780

Val Met Asp Gly Phe Glu Arg Phe Ala Gln Gly Gln Leu Ile Thr Leu  
785 790 795 800

Phe Ser Ala Thr Asn Tyr Cys Gly Thr Ala Asn Asn Ala Gly Ala Ile  
805 810 815

Leu Val Val Gly Arg Gly Leu Val Ile Val Pro Lys Leu Ile His Pro  
820 825 830

Leu Pro Pro Pro Ile Leu Ser Pro Glu Asn Ser Pro Glu His Ser Gly  
835 840 845

Asp Asp Ala Trp Met Gln Glu Leu Asn Ile Gln Arg Pro Pro Thr Pro  
850 855 860

Thr Arg Gly Arg Pro Gln Pro Asp Phe Asp Arg Ser Ser Leu Ala Tyr  
865 870 875 880

Ile

<210> 371

<211> 810

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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caaggttatt tgcagagtct cttgagatca acctattcct caagaccact gtattatcat    180
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aacttggttg cagcactagt ccgtggcatg cgtgttgaag atgctttgat gcaattgcag    420
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ataccaggtg gtcgtctaac agtcatagtc agagagacga ctgcagagga agaagctgag    660
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ccacacaagt tgatcgagac aagtccaatc tggaaccgca gaggtaccaa aggcaatcac    780
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&lt;210&gt; 372

&lt;211&gt; 269

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 372

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Lys Arg Val  Lys Asp Ser His Ile Ser Thr Ala Asn Tyr Ser Ser Thr
      20              25             30

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Arg Asn  Leu Glu Ser Pro Phe Ser Gln Gly Tyr Leu Gln Ser Leu Leu
      35              40             45

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Arg Ser Thr Tyr Ser Ser Arg Pro Leu Tyr Tyr His Leu Gln Gln Leu
      50              55             60

```

Gly Ile Ser Thr Ser Arg Gln Leu Gln Ala Gly Glu Glu Pro Val Ser  
65 70 75 80

Ser Pro Leu Ser Ser Pro Ala Leu Leu Gly Ser Gly Lys Glu Glu Glu  
85 90 95

Gln Lys Ile Ile Pro Lys Arg Gln Lys Val Gln Ala Val Leu Lys Ser  
100 105 110

Ile Lys Gln Ser Pro Lys Lys Val Asn Leu Val Ala Ala Leu Val Arg  
115 120 125

Gly Met Arg Val Glu Asp Ala Leu Met Gln Leu Gln Val Thr Val Lys  
130 135 140

Arg Ala Ser Gln Thr Val Tyr Arg Val Ile His Ala Ala Arg Ala Asn  
145 150 155 160

Ala Thr His Asn His Gly Leu Asp Pro Asp Arg Leu Leu Val Ala Glu  
165 170 175

Ala Phe Val Gly Lys Gly Leu Phe Gly Lys Lys Val Ala Tyr His Ala  
180 185 190

Lys Gly Arg Ser Gly Ile Ile Ser Ile Pro Arg Cys Arg Leu Thr Val  
195 200 205

Ile Val Arg Glu Thr Thr Ala Glu Glu Glu Ala Glu Ile Ala Arg Leu  
210 215 220

Lys Val His Asn Phe Lys Lys Leu Asn Lys Arg Gln Arg Gln Leu Val  
225 230 235 240

Pro His Lys Leu Ile Glu Thr Ser Pro Ile Trp Asn Arg Arg Gly Thr  
245 250 255

Lys Gly Asn His Arg Ser Ser Glu Leu Val Pro Ser His  
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<210> 373

<211> 612

<212> DNA

<213> Arabidopsis thaliana

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<210> 374

<211> 203

<212> PRT

<213> *Arabidopsis thaliana*

<400> 374

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Met Ile Lys Ser Val Thr Leu Arg Ser Phe His Leu Pro Ile Glu Phe
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Asn Asp Thr Lys Phe Val Ser Arg Pro Cys Phe Leu Ala Arg Ser Phe
20      25      30

Pro Val Val Arg Cys Ser Ser Thr Arg Asp Val Pro Lys Leu Glu Leu
35      40      45

Phe Ser Arg Gly Lys Phe Asp Arg Ile Leu Gln Asp Pro Pro Leu Ile
50      55      60

Glu Lys Ala Glu Ser Glu Leu Ser Asp Tyr Cys Ser Thr Leu Glu Gly
65      70      75      80

Asp Asp Ser Tyr Ser Cys Trp Arg Ala Tyr Phe Glu Leu Lys Asp Leu
85      90      95

Glu Arg Glu Lys Pro Lys Val Glu Val Glu Asn Leu Ile Leu Gln Thr
100     105     110

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Gly Gly Leu Lys Ser Leu Ile Gly Cys Leu His Gly Val Ala Ser Met  
 115 120 125

Glu Lys Asp Asn Lys Thr Lys Asn Gly Leu His Val Gly Glu Glu Ser  
 130 135 140

Asp Arg Glu Lys Gly Met Asn Leu His Ile His Ile Pro Asp Gly Leu  
 145 150 155 160

Pro Lys Ser Glu Gln Glu Leu Glu Glu Glu Glu Lys Ser Lys Met Pro  
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Asp Ser Ala Phe Thr Arg Leu Leu Arg Ser Lys Gly Thr Ile Pro Ala  
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Trp Phe Ser His Ala Pro Asp His Glu Thr Asp  
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<213> Arabidopsis thaliana

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 gatactgatt tatccatccc atcaagcggg cctagtggct cctatgatca cagtgcgaagt 540  
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&lt;210&gt; 376

&lt;211&gt; 421

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 376

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1      5      10      15

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Arg Ala Asp Glu Leu Gln Lys His Glu Pro Leu Val Ala Tyr Tyr Cys
20      25      30

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Arg Leu Tyr Ala Met Glu Arg Gly Leu Lys Ile Pro Gln Ser Glu Arg
35      40      45

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Thr Lys Thr Thr Asn Ser Ile Leu Met Ser Leu Ile Asn Gln Leu Glu
50      55      60

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Lys Asp Lys Lys Ser Leu Thr Leu Ser Pro Asp Asp Asn Met His Val
65      70      75      80

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Glu Gly Phe Ala Leu Ser Val Phe Ala Lys Ala Asp Lys Gln Asp Arg
85      90      95

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Ala Gly Arg Ala Asp Leu Gly Thr Ala Lys Thr Phe Tyr Ala Ala Ser
100     105     110

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Ile Phe Phe Glu Ile Leu Ser Gln Phe Gly Pro Val Pro Pro Asp Ile
115     120     125

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047-E2F-PCT.ST25.txt

Glu Gln Lys His Lys Tyr Ala Ala Trp Lys Ala Ala Asp Ile Arg Lys  
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 Asp Thr Asp Leu Ser Ile Pro Ser Ser Gly Pro Ser Gly Ser Tyr Asp  
 165 170 175  
 His Ser Ala Ser Asp Thr Asn Thr Thr Ser His His Arg Thr Glu Leu  
 180 185 190  
 Asp Pro Pro His Asp Ser Asn Asp Asp Ser Ser His His Gln Phe Pro  
 195 200 205  
 Glu Val Pro Gln His Pro Leu Pro Pro Arg Phe Tyr Asp Asn Pro Thr  
 210 215 220  
 Asn Asp Tyr Pro Ala Asp Val Pro Pro Pro Pro Pro Ser Ser Tyr Pro  
 225 230 235 240  
 Ser Asn Asp His Leu Pro Pro Pro Thr Gly Pro Ser Asp Ser Pro Tyr  
 245 250 255  
 Pro His Pro Tyr Ser His Gln Pro Tyr His Gln Asp Pro Pro Lys His  
 260 265 270  
 Met Pro Pro Pro Gln Asn Tyr Ser Ser His Glu Pro Ser Pro Asn Ser  
 275 280 285  
 Leu Pro Asn Phe Gln Ser Tyr Pro Ser Phe Ser Glu Ser Ser Leu Pro  
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 Ser Thr Ser Pro His Tyr Pro Ser His Tyr Gln Asn Pro Glu Pro Tyr  
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 Tyr Ser Ser Pro His Ser Ala Pro Ala Pro Ser Ser Thr Ser Phe Ser  
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 Ser Ala Pro Pro Pro Pro Tyr Ser Ser Asn Gly Arg Ile Asn Ile  
 340 345 350  
 Ala Pro Val Leu Asp Pro Ala Pro Ser Ser Ala Gln Lys Tyr His Tyr  
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 Asp Ser Ser Tyr Gln Pro Gly Pro Glu Lys Val Ala Glu Ala Leu Lys  
 370 375 380

047-E2F-PCT.ST25.txt

Ala Ala Arg Phe Ala Val Gly Ala Leu Ala Phe Asp Glu Val Ser Thr  
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Ala Val Glu His Leu Lys Lys Ser Leu Glu Leu Leu Thr Asn Pro Ser  
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Ala Gly Ala Gly His  
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<211> 2568

<212> DNA

<213> Arabidopsis thaliana

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 gttgcttcaa ggaagcagag gtcgacgagt cctcaagaag gcggtaatgg acatccgtgg 1380  
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 ataatcgata gaggaggagt aaattcgggg accggggactg atgatgatgc ggaagacgcg 2520  
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<210> 378

<211> 855

<212> PRT

<213> Arabidopsis thaliana

<400> 378

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047-E2F-PCT.ST25.txt

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 35 40 45  
 Phe Val Pro Asp Ser Leu His Ser Ser Leu Val Leu Lys Ile Gly Asn  
 50 55 60  
 Ser Ser Val Ala Thr Ser Thr Thr Ser Asn Asn Ser Thr Asn Ser Ile  
 65 70 75 80  
 Tyr Gln Thr Ala Arg Val Phe Ser Ser Leu Ala Ser Tyr Arg Phe Lys  
 85 90 95  
 Ile Thr Ser Leu Gly Arg His Trp Ile Arg Leu His Phe Ser Pro Ile  
 100 105 110  
 Asn Asn Ser Thr Trp Asn Leu Thr Ser Ala Ser Ile Thr Val Val Thr  
 115 120 125  
 Glu Asp Phe Val Leu Leu Asn Asn Phe Ser Phe Asn Asn Phe Asn Gly  
 130 135 140  
 Ser Tyr Ile Phe Lys Glu Tyr Thr Val Asn Val Thr Ser Glu Phe Leu  
 145 150 155 160  
 Thr Leu Ser Phe Ile Pro Ser Asn Asn Ser Val Val Phe Val Asn Ala  
 165 170 175  
 Ile Glu Val Val Ser Val Pro Asp Asn Leu Ile Pro Asp Gln Ala Leu  
 180 185 190  
 Ala Leu Asn Pro Ser Thr Pro Phe Ser Gly Leu Ser Leu Leu Ala Phe  
 195 200 205  
 Glu Thr Val Tyr Arg Leu Asn Met Gly Gly Pro Leu Leu Thr Ser Gln  
 210 215 220  
 Asn Asp Thr Leu Gly Arg Gln Trp Asp Asn Asp Ala Glu Tyr Leu His  
 225 230 235 240  
 Val Asn Ser Ser Val Leu Val Val Thr Ala Asn Pro Ser Ser Ile Lys  
 245 250 255  
 Tyr Ser Pro Ser Val Thr Gln Glu Thr Ala Pro Asn Met Val Tyr Ala  
 260 265 270

047-E2F-PCT.ST25.txt

Thr Ala Asp Thr Met Gly Asp Ala Asn Val Ala Ser Pro Ser Phe Asn  
275 280 285

Val Thr Trp Val Leu Pro Val Asp Pro Asp Phe Arg Tyr Phe Val Arg  
290 295 300

Val His Phe Cys Asp Ile Val Ser Gln Ala Leu Asn Thr Leu Val Phe  
305 310 315 320

Asn Leu Tyr Val Asn Asp Asp Leu Ala Leu Gly Ser Leu Asp Leu Ser  
325 330 335

Thr Leu Thr Asn Gly Leu Lys Val Pro Tyr Phe Lys Asp Phe Ile Ser  
340 345 350

Asn Gly Ser Val Glu Ser Ser Gly Val Leu Thr Val Ser Val Gly Pro  
355 360 365

Asp Ser Gln Ala Asp Ile Thr Asn Ala Thr Met Asn Gly Leu Glu Val  
370 375 380

Leu Lys Ile Ser Asn Glu Ala Lys Ser Leu Ser Gly Val Ser Ser Val  
385 390 395 400

Lys Ser Leu Leu Pro Gly Gly Ser Gly Ser Lys Ser Lys Lys Ala  
405 410 415

Val Ile Ile Gly Ser Leu Val Gly Ala Val Thr Leu Ile Leu Ile  
420 425 430

Ala Val Cys Cys Tyr Cys Cys Leu Val Ala Ser Arg Lys Gln Arg Ser  
435 440 445

Thr Ser Pro Gln Glu Gly Gly Asn Gly His Pro Trp Leu Pro Leu Pro  
450 455 460

Leu Tyr Gly Leu Ser Gln Thr Leu Thr Lys Ser Thr Ala Ser His Lys  
465 470 475 480

Ser Ala Thr Ala Ser Cys Ile Ser Leu Ala Ser Thr His Leu Gly Arg  
485 490 495

Cys Phe Met Phe Gln Glu Ile Met Asp Ala Thr Asn Lys Phe Asp Glu  
500 505 510

Ser Ser Leu Leu Gly Val Gly Gly Phe Gly Arg Val Tyr Lys Gly Thr  
Page 601

515  
 520 047-E2F-PCT.ST25.txt  
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Leu Glu Asp Gly Thr Lys Val Ala Val Lys Arg Gly Asn Pro Arg Ser  
 530 535 540

Glu Gln Gly Met Ala Glu Phe Arg Thr Glu Ile Glu Met Leu Ser Lys  
 545 550 555 560

Leu Arg His Arg His Leu Val Ser Leu Ile Gly Tyr Cys Asp Glu Arg  
 565 570 575

Ser Glu Met Ile Leu Val Tyr Glu Tyr Met Ala Asn Gly Pro Leu Arg  
 580 585 590

Ser His Leu Tyr Gly Ala Asp Leu Pro Pro Leu Ser Trp Lys Gln Arg  
 595 600 605

Leu Glu Ile Cys Ile Gly Ala Ala Arg Gly Leu His Tyr Leu His Thr  
 610 615 620

Gly Ala Ser Gln Ser Ile Ile His Arg Asp Val Lys Thr Thr Asn Ile  
 625 630 635 640

Leu Leu Asp Glu Asn Leu Val Ala Lys Val Ala Asp Phe Gly Leu Ser  
 645 650 655

Lys Thr Gly Pro Ser Leu Asp Gln Thr His Val Ser Thr Ala Val Lys  
 660 665 670

Gly Ser Phe Gly Tyr Leu Asp Pro Glu Tyr Phe Arg Arg Gln Gln Leu  
 675 680 685

Thr Glu Lys Ser Asp Val Tyr Ser Phe Gly Val Val Leu Met Glu Val  
 690 695 700

Leu Cys Cys Arg Pro Ala Leu Asn Pro Val Leu Pro Arg Glu Gln Val  
 705 710 715 720

Asn Ile Ala Glu Trp Ala Met Ala Trp Gln Lys Lys Gly Leu Leu Asp  
 725 730 735

Gln Ile Met Asp Ser Asn Leu Thr Gly Lys Val Asn Pro Ala Ser Leu  
 740 745 750

Lys Lys Phe Gly Glu Thr Ala Glu Lys Cys Leu Ala Glu Tyr Gly Val  
 755 760 765



Asp Arg Pro Ser Met Gly Asp Val Leu Trp Asn Leu Glu Tyr Ala Leu  
 770 775 780

Gln Leu Glu Glu Thr Ser Ser Ala Leu Met Glu Pro Asp Asp Asn Ser  
 785 790 795 800

Thr Asn His Ile Pro Gly Ile Pro Met Ala Pro Met Glu Pro Phe Asp  
 805 810 815

Asn Ser Met Ser Ile Ile Asp Arg Gly Gly Val Asn Ser Gly Thr Gly  
 820 825 830

Thr Asp Asp Asp Ala Glu Asp Ala Thr Thr Ser Ala Val Phe Ser Gln  
 835 840 845

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 850 855

<210> 379

<211> 1446

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 380

&lt;211&gt; 481

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 380

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Met Ala Ser Ala Ala Ala Ser Ser Ala Phe Ser Leu Leu Lys Ser Thr
1      5      10

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Gly Ala Val Ala Ser Ser Ala Gly Thr Arg Ala Arg Ala Ser Leu Leu
20      25      30

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Pro Ile Pro Ser Thr Ser Val Ser Ala Arg Pro Leu Gly Phe Ser Ala
35      40      45

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Thr Leu Asp Ser Arg Arg Phe Ser Leu His Val Ala Ser Lys Val Glu
50      55      60

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Ser Val Arg Gly Lys Gly Ser Arg Gly Val Val Ser Met Ala Lys Lys
65      70      75      80

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Ser Val Gly Asp Leu Thr Ser Ala Asp Leu Lys Gly Lys Lys Val Phe
85      90      95

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Val Arg Ala Asp Leu Asn Val Pro Leu Asp Asp Asn Gln Thr Ile Thr
100     105     110

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Asp Asp Thr Arg Ile Arg Ala Ala Ile Pro Thr Ile Lys Tyr Leu Ile  
 115 120 125  
 Glu Asn Gly Ala Lys Val Ile Leu Ser Thr His Leu Gly Arg Pro Lys  
 130 135 140  
 Gly Val Thr Pro Lys Phe Ser Leu Ala Pro Leu Val Pro Arg Leu Ser  
 145 150 155 160  
 Glu Leu Leu Gly Ile Glu Val Thr Lys Ala Asp Asp Cys Ile Gly Pro  
 165 170 175  
 Glu Val Glu Ser Leu Val Ala Ser Leu Pro Glu Gly Gly Val Leu Leu  
 180 185 190  
 Leu Glu Asn Val Arg Phe Tyr Lys Glu Glu Glu Lys Asn Asp Pro Glu  
 195 200 205  
 Phe Ala Lys Lys Leu Ala Ser Leu Ala Asp Leu Tyr Val Asn Asp Ala  
 210 215 220  
 Phe Gly Thr Ala His Arg Ala His Ala Ser Thr Glu Gly Val Thr Lys  
 225 230 235 240  
 Phe Leu Lys Pro Ser Val Ala Gly Phe Leu Leu Gln Lys Glu Leu Asp  
 245 250 255  
 Tyr Leu Val Gly Ala Val Ser Asn Pro Lys Arg Pro Phe Ala Ala Ile  
 260 265 270  
 Val Gly Gly Ser Lys Val Ser Ser Lys Ile Gly Val Ile Glu Ser Leu  
 275 280 285  
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 290 295 300  
 Phe Tyr Lys Ala Gln Gly Leu Ser Val Gly Ser Ser Leu Val Glu Glu  
 305 310 315 320  
 Asp Lys Leu Glu Leu Ala Thr Glu Leu Leu Ala Lys Ala Lys Ala Lys  
 325 330 335  
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 340 345 350  
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 355 360 365

047-E2F-PCT.ST25.txt

Gly Trp Met Gly Leu Asp Ile Gly Pro Asp Ser Ile Lys Thr Phe Asn  
370 375 380

Glu Ala Leu Asp Thr Thr Gln Thr Val Ile Trp Asn Gly Pro Met Gly  
385 390 395 400

Val Phe Glu Met Glu Lys Phe Ala Ala Gly Thr Glu Ala Ile Ala Asn  
405 410 415

Lys Leu Ala Glu Leu Ser Glu Lys Gly Val Thr Thr Ile Ile Gly Gly  
420 425 430

Gly Asp Ser Val Ala Ala Val Glu Lys Val Gly Val Ala Gly Val Met  
435 440 445

Ser His Ile Ser Thr Gly Gly Gly Ala Ser Leu Glu Leu Leu Glu Gly  
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<211> 417

<212> DNA

<213> Arabidopsis thaliana

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gataaagctc cttacgtcgc taaggctgag agcagaaaga ctgaatatat taagaatgtg 300  
caacagtaca acttgaaact ggctagtggg accaatagag aagaggatga ctctgacaaa 360  
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<210> 382

<211> 138

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 382

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35 40 45Phe Arg Lys Glu Phe Asn Leu Ala Asn Pro Asn Asn Lys Ser Val Ala  
50 55 60Thr Val Gly Lys Ala Ala Gly Ala Arg Trp Lys Ala Met Thr Asp Glu  
65 70 75 80Asp Lys Ala Pro Tyr Val Ala Lys Ala Glu Ser Arg Lys Thr Glu Tyr  
85 90 95Ile Lys Asn Val Gln Gln Tyr Asn Leu Lys Leu Ala Ser Gly Thr Asn  
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&lt;210&gt; 383

&lt;211&gt; 516

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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047-E2F-PCT.ST25.txt

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<210> 384

<211> 171

<212> PRT

<213> Arabidopsis thaliana

<400> 384

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Arg	Ser	Thr	Ser	Ala	Thr	Arg	Ala	Pro	Pro	Lys	Leu	Ala	Leu	Lys	Ser
		35					40					45			

Ser	Leu	Lys	Asp	Phe	Gly	Val	Ile	Ala	Val	Ala	Thr	Ala	Ala	Ser	Ile
	50					55					60				

Val	Leu	Ala	Gly	Asn	Ala	Met	Ala	Met	Glu	Val	Leu	Leu	Gly	Ser	Asp
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Asp	Gly	Ser	Leu	Ala	Phe	Val	Pro	Ser	Glu	Phe	Thr	Val	Ala	Lys	Gly
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Glu	Lys	Ile	Val	Phe	Lys	Asn	Asn	Ala	Gly	Phe	Pro	His	Asn	Val	Val
		100						105					110		

Phe	Asp	Glu	Asp	Glu	Ile	Pro	Ser	Gly	Val	Asp	Ala	Ser	Lys	Ile	Ser
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Met	Asp	Glu	Thr	Ala	Leu	Leu	Asn	Gly	Ala	Gly	Glu	Thr	Tyr	Glu	Val
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Thr	Leu	Thr	Glu	Pro	Gly	Ser	Tyr	Gly	Phe	Tyr	Cys	Ala	Pro	His	Gln
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<211> 930

<212> DNA

<213> Arabidopsis thaliana

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<210> 386

<211> 309

<212> PRT

<213> Arabidopsis thaliana

<400> 386

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 50 55 60  
 Val Arg Leu Leu Cys Val Glu His Val His Gln Pro Ser Thr Lys Ser  
 65 70 75 80  
 Gln Ser Thr Lys Ser Asn Leu Tyr Leu Val Phe Glu Tyr Leu Asp Thr  
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 Asp Leu Lys Lys Phe Ile Asp Ser Tyr Arg Lys Gly Pro Asn Pro Lys  
 100 105 110  
 Pro Leu Glu Pro Phe Leu Ile Gln Lys Leu Met Phe Gln Leu Cys Lys  
 115 120 125  
 Gly Val Ala His Cys His Ser His Gly Val Leu His Arg Asp Leu Lys  
 130 135 140  
 Pro Gln Asn Leu Leu Leu Val Lys Asp Lys Glu Leu Leu Lys Ile Ala  
 145 150 155 160  
 Asp Leu Gly Leu Gly Arg Ala Phe Thr Val Pro Leu Lys Ser Tyr Thr  
 165 170 175  
 His Glu Ile Val Thr Leu Trp Tyr Arg Ala Pro Glu Val Leu Leu Gly  
 180 185 190  
 Ser Thr His Tyr Ser Thr Gly Val Asp Met Trp Ser Val Gly Cys Ile  
 195 200 205  
 Phe Ala Glu Met Val Arg Arg Gln Ala Leu Phe Pro Gly Asp Ser Glu  
 210 215 220  
 Phe Gln Gln Leu Leu His Ile Phe Arg Leu Leu Gly Thr Pro Thr Glu  
 225 230 235 240  
 Gln Gln Trp Pro Gly Val Ser Thr Leu Arg Asp Trp His Val Tyr Pro  
 245 250 255  
 Lys Trp Glu Pro Gln Asp Leu Thr Leu Ala Val Pro Ser Leu Ser Pro  
 260 265 270



047-E2F-PCT.ST25.txt

Gln Gly Val Asp Leu Leu Thr Lys Met Leu Lys Tyr Asn Pro Ala Glu  
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Arg Ile Ser Ala Lys Thr Ala Leu Asp His Pro Tyr Phe Asp Ser Leu  
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Asp Lys Ser Gln Phe  
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<212> DNA

<213> Arabidopsis thaliana

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<210> 388

<211> 527

<212> PRT

<213> Arabidopsis thaliana

<400> 388

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Ile Leu Lys Ser Leu His Ile Asp Asn Pro Ala Ala Lys Val Leu Val  
 65 70 75 80

Asp Ile Ser Lys Val Gln Asp Asp Glu Val Gly Asp Gly Thr Thr Ser  
 85 90 95

Val Val Val Leu Ala Gly Glu Leu Leu Arg Glu Ala Glu Lys Leu Val  
 100 105 110

Ala Ser Lys Ile His Pro Met Thr Ile Ile Ala Gly Tyr Arg Met Ala  
 115 120 125

Ser Glu Cys Ala Arg Asn Ala Leu Leu Lys Arg Val Ile Asp Asn Lys  
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Asp Asn Ala Glu Lys Phe Arg Ser Asp Leu Leu Lys Ile Ala Met Thr  
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 225 230 235 240  
 Thr Asp Lys Val Lys Ile Tyr Gly Ala Arg Val Arg Val Asp Ser Met  
 245 250 255  
 Thr Lys Val Ala Glu Ile Glu Gly Ala Glu Lys Glu Lys Met Lys Asp  
 260 265 270  
 Lys Val Lys Lys Ile Ile Gly His Gly Ile Asn Cys Phe Val Asn Arg  
 275 280 285  
 Gln Leu Ile Tyr Asn Phe Pro Glu Glu Leu Phe Ala Asp Ala Gly Ile  
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 Leu Ala Ile Glu His Ala Asp Phe Glu Gly Ile Glu Arg Leu Gly Leu  
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 355 360 365  
 Val Leu Arg Gly Ala Ser His His Val Leu Asp Glu Ala Glu Arg Ser  
 370 375 380  
 Leu His Asp Ala Leu Cys Val Leu Ser Gln Thr Val Asn Asp Thr Arg  
 613

385 390 395 400

Val Leu Leu Gly Gly Trp Pro Glu Met Val Met Ala Lys Glu Val  
405 410 415

Asp Glu Leu Ala Arg Lys Thr Ala Gly Lys Lys Ser His Ala Ile Glu  
420 425 430

Ala Phe Ser Arg Ala Leu Val Ala Ile Pro Thr Thr Ile Ala Asp Asn  
435 440 445

Ala Gly Leu Asp Ser Ala Glu Leu Val Ala Gln Leu Arg Ala Glu His  
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His Thr Glu Gly Cys Asn Ala Gly Ile Asp Val Ile Thr Gly Ala Val  
465 470 475 480

Gly Asp Met Glu Glu Arg Gly Ile Tyr Glu Ala Phe Lys Val Lys Gln  
485 490 495

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<211> 1218

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 390

&lt;211&gt; 405

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 390

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Ser Val Thr Arg Gly Met Val Leu Gly Leu Val Lys Ser Thr Phe Tyr
20     25     30

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Asp His Phe Cys Ala Gly Glu Asp Ala Asp Ala Ala Glu Arg Val
35     40     45

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Arg Ser Val Tyr Glu Ala Thr Gly Leu Lys Gly Met Leu Val Tyr Gly
50     55     60

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Val Glu His Ala Asp Asp Ala Val Ser Cys Asp Asp Asn Met Gln Gln
65     70     75     80

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Phe Ile Arg Thr Ile Glu Ala Ala Lys Ser Leu Pro Thr Ser His Phe
85     90     95

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Ser Ser Val Val Val Lys Ile Thr Ala Ile Cys Pro Ile Ser Leu Leu
Page 615

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 165 170 175  
 Lys Cys Gln Glu Ser Asn Val Pro Leu Leu Ile Asp Ala Glu Asp Thr  
 180 185 190  
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 195 200 205  
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 210 215 220  
 Tyr Leu Arg Asp Ala Gly Glu Arg Leu His Leu Ala Val Gln Asn Ala  
 225 230 235 240  
 Glu Lys Glu Asn Val Pro Met Gly Phe Lys Leu Val Arg Gly Ala Tyr  
 245 250 255  
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 260 265 270  
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 275 280 285  
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 Ser Asp Leu Gly Ile Asp Lys Gln Asn Gly Lys Ile Glu Phe Ala Gln  
 325 330 335  
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 340 345 350

Phe Asn Val Ser Lys Tyr Met Pro Phe Gly Pro Val Ala Thr Ala Ile  
 355 360 365

Pro Tyr Leu Leu Arg Arg Ala Tyr Glu Asn Arg Gly Met Met Ala Thr  
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Ile Ala Gly Ile Ala  
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<211> 615

<212> DNA

<213> Arabidopsis thaliana

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<211> 204

<212> PRT

<213> Arabidopsis thaliana

<400> 392

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Ala	Lys	His	Ile	50	Glu	Ser	Thr	Gln	55	Gln	Thr	Leu	Pro	60	Pro	Ser	His	Met	
Thr	Leu	Leu	Ser	65	Tyr	His	Leu	Asn	70	Gln	Met	Lys	Lys	75	Thr	Gly	Gln	Leu	
Ile	Met	Val	Lys	85	Asn	Asn	Tyr	Met	90	Lys	Asp	Pro	Asp	95	Ala	Pro	Pro		
Lys	Arg	Gly	Arg	100	Gly	Arg	Pro	Pro	105	Gln	Lys	Thr	Gln	110	Ala	Glu	Ser		
Asp	Ala	Ala	Ala	115	Ala	Ala	Val	Val	120	Ala	Ala	Thr	Val	125	Val	Ser	Thr	Asp	
Pro	Pro	Arg	Ser	130	Arg	Gly	Arg	Pro	135	Pro	Lys	Pro	Lys	140	Asp	Pro	Ser	Glu	
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Pro	Ala	Ala	Gln	180	Ala	Thr	Gly	Glu	185	Arg	Arg	Gly	Arg	190	Gly	Arg	Pro	Pro	
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&lt;211&gt; 1953

<212> DNA

<213> Arabidopsis thaliana

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Page 618



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1953

&lt;210&gt; 394

&lt;211&gt; 650

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 394

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35 40 45Glu Ser Lys Ile Asp Ser Asp Leu Gln His Leu Ala Leu Gly Glu Met  
50 55 60Arg Asp Ile Asp Ile Leu Glu Asp Glu Gly Asp Glu Asp Glu Val Ala  
65 70 75 80Lys Pro Glu Glu Phe Asp Val Lys Ser Asn Ser Ser Asn Leu Asp Leu  
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100 105 110Thr Lys Ser Asn Val Gly Val Gly Gly Met Arg Lys Lys Lys Val Gly  
115 120 125Gly Thr Lys Leu Gln Asn Gly Asn Glu Glu Pro Ser Ser Glu Asn Val  
130 135 140Glu Leu Ala Arg Phe Leu Leu Asn Gln Ala Arg Asn Leu Val Ser Ser  
145 150 155 160Gly Asp Ser Thr His Lys Ala Leu Glu Leu Thr His Arg Ala Ala Lys  
165 170 175Leu Phe Glu Ala Ser Ala Glu Asn Gly Lys Pro Cys Leu Glu Trp Ile  
180 185 190

Met Cys Leu His Val Thr Ala Ala Val His Cys Lys Leu Lys Glu Tyr  
 195 200 205  
 Asn Glu Ala Ile Pro Val Leu Gln Arg Ser Val Glu Ile Pro Val Val  
 210 215 220  
 Glu Glu Gly Glu Glu His Ala Leu Ala Lys Phe Ala Gly Leu Met Gln  
 225 230 235 240  
 Leu Gly Asp Thr Tyr Ala Met Val Gly Gln Leu Glu Ser Ser Ile Ser  
 245 250 255  
 Cys Tyr Thr Glu Gly Leu Asn Ile Gln Lys Lys Val Leu Gly Glu Asn  
 260 265 270  
 Asp Pro Arg Val Gly Glu Thr Cys Arg Tyr Leu Ala Glu Ala Leu Val  
 275 280 285  
 Gln Ala Leu Arg Phe Asp Glu Ala Gln Gln Val Cys Glu Thr Ala Leu  
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 305 310 315 320  
 Asp Arg Arg Leu Met Gly Leu Ile Cys Glu Thr Lys Gly Asp His Glu  
 325 330 335  
 Asn Ala Leu Glu His Leu Val Leu Ala Ser Met Ala Met Ala Ala Asn  
 340 345 350  
 Gly Gln Glu Ser Glu Val Ala Phe Val Asp Thr Ser Ile Gly Asp Ser  
 355 360 365  
 Tyr Leu Ser Leu Ser Arg Phe Asp Glu Ala Ile Cys Ala Tyr Gln Lys  
 370 375 380  
 Ser Leu Thr Ala Leu Lys Thr Ala Lys Gly Glu Asn His Pro Ala Val  
 385 390 395 400  
 Gly Ser Val Tyr Ile Arg Leu Ala Asp Leu Tyr Asn Arg Thr Gly Lys  
 405 410 415  
 Val Arg Glu Ala Lys Ser Tyr Cys Glu Asn Ala Leu Arg Ile Tyr Glu  
 420 425 430  
 Ser His Asn Leu Glu Ile Ser Pro Glu Glu Ile Ala Ser Gly Leu Thr  
 435 440 445

047-E2F-PCT.ST25.txt

Asp Ile Ser Val Ile Cys Glu Ser Met Asn Glu Val Glu Gln Ala Ile  
 450 455 460  
 Thr Leu Leu Gln Lys Ala Leu Lys Ile Tyr Ala Asp Ser Pro Gly Gln  
 465 470 475 480  
 Lys Ile Met Ile Ala Gly Ile Glu Ala Gln Met Gly Val Leu Tyr Tyr  
 485 490 495  
 Met Met Gly Lys Tyr Met Glu Ser Tyr Asn Thr Phe Lys Ser Ala Ile  
 500 505 510  
 Ser Lys Leu Arg Ala Thr Gly Lys Lys Gln Ser Thr Phe Phe Gly Ile  
 515 520 525  
 Ala Leu Asn Gln Met Gly Leu Ala Cys Ile Gln Leu Asp Ala Ile Glu  
 530 535 540  
 Glu Ala Val Glu Leu Phe Glu Glu Ala Lys Cys Ile Leu Glu Gln Glu  
 545 550 555 560  
 Cys Gly Pro Tyr His Pro Glu Thr Leu Gly Leu Tyr Ser Asn Leu Ala  
 565 570 575  
 Gly Ala Tyr Asp Ala Ile Gly Arg Leu Asp Asp Ala Ile Lys Leu Leu  
 580 585 590  
 Gly His Val Val Gly Val Arg Glu Glu Lys Leu Gly Thr Ala Asn Pro  
 595 600 605  
 Val Thr Glu Asp Glu Lys Arg Arg Leu Ala Gln Leu Leu Lys Glu Ala  
 610 615 620  
 Gly Asn Val Thr Gly Arg Lys Ala Lys Ser Leu Lys Thr Leu Ile Asp  
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 Ser Asp Leu Thr Ser Ser Ser Ala Leu Arg  
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<210> 395

<211> 1365

<212> DNA

<213> Arabidopsis thaliana

047-E2F-PCT.ST25.txt

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cctacttaca cagatttgct ctccggcttt gggactaaca tagatccatc ccatggtcag 360
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<210> 396

<211> 454

<212> PRT

<213> Arabidopsis thaliana

<400> 396

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047-E2F-PCT.ST25.txt

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 35 40 45  
 Ser Thr Leu Arg Thr Lys His Thr Glu Ser Val Glu Cys Asp Ala Pro  
 50 55 60  
 Glu Asn Ser Val Val Trp Gln Ser Ser Ala Asp Asp Asp Lys Val Asp  
 65 70 75 80  
 Val Val Ser Gly Ser Arg Arg Tyr Gly Ser Glu Asn Trp Met Ser Ser  
 85 90 95  
 Ala Arg His Glu Pro Thr Tyr Thr Asp Leu Leu Ser Gly Phe Gly Thr  
 100 105 110  
 Asn Ile Asp Pro Ser His Gly Gln Arg Ile Pro Phe Tyr Asp His Ser  
 115 120 125  
 Ser Ser Pro Ser Met Pro Ala Lys Arg Ile Leu Ser Asp Ser Glu Gly  
 130 135 140  
 Lys Phe Asp Tyr Leu Ala Asn Gln Trp Gln Met Ile His Ser Gly Leu  
 145 150 155 160  
 Ser Leu Lys Leu His Glu Ser Pro Lys Val Pro Ala Ala Thr Asp Ala  
 165 170 175  
 Ser Leu Gln Gly Arg Cys Asn Val Lys Tyr Ser Glu Tyr Pro Val Leu  
 180 185 190  
 Asn Gly Leu Ser Thr Glu Asn Ala Gly Gly Asn Trp Pro Ile Arg Pro  
 195 200 205  
 Arg Ala Leu Asn Tyr Tyr Glu Glu Val Val Asn Ala Gln Ala Gln Ala  
 210 215 220  
 Gln Ala Arg Glu Gln Val Thr Lys Gln Pro Phe Thr Ile Gln Glu Glu  
 225 230 235 240  
 Thr Ala Lys Ser Arg Glu Gly Asn Cys Arg Leu Phe Gly Ile Pro Leu  
 245 250 255  
 Thr Asn Asn Met Asn Gly Thr Asp Ser Thr Met Ser Gln Arg Asn Asn  
 260 265 270

047-E2F-PCT.ST25.txt

Leu Asn Asp Ala Ala Gly Leu Thr Gln Ile Ala Ser Pro Lys Val Gln  
275 280 285

Asp Leu Ser Asp Gln Ser Lys Gly Ser Lys Ser Thr Asn Asp His Arg  
290 295 300

Glu Gln Gly Arg Pro Phe Gln Thr Asn Asn Pro His Pro Lys Asp Ala  
305 310 315 320

Gln Thr Lys Thr Asn Ser Ser Arg Ser Cys Thr Lys Val His Lys Gln  
325 330 335

Gly Ile Ala Leu Gly Arg Ser Val Asp Leu Ser Lys Phe Gln Asn Tyr  
340 345 350

Glu Glu Leu Val Ala Glu Leu Asp Arg Leu Phe Glu Phe Asn Gly Glu  
355 360 365

Leu Met Ala Pro Lys Lys Asp Trp Leu Ile Val Tyr Thr Asp Glu Glu  
370 375 380

Asn Asp Met Met Leu Val Gly Asp Asp Pro Trp Gln Glu Phe Cys Cys  
385 390 395 400

Met Val Arg Lys Ile Phe Ile Tyr Thr Lys Glu Glu Val Arg Lys Met  
405 410 415

Asn Pro Gly Thr Leu Ser Cys Arg Ser Glu Glu Glu Ala Val Val Gly  
420 425 430

Glu Gly Ser Asp Ala Lys Asp Ala Lys Ser Ala Ser Asn Pro Ser Leu  
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Ser Ser Ala Gly Asn Ser  
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<210> 397

<211> 3096

<212> DNA

<213> Arabidopsis thaliana

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cttggtgttg	tgcgtatata	ttcgagaaag	gtgaattacc	tctttgatga	ttgcagtggag	240
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047-E2F-PCT.ST25.txt

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<210> 398

<211> 1031

<212> PRT

<213> Arabidopsis thaliana

<400> 398

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Ala Asp  Thr  Asp Ile Gly Val  Ser Val Asp Ser Ile  Leu Phe Pro Glu
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047-E2F-PCT.ST25.txt

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Arg Ile Tyr Ser Arg Lys Val Asn Tyr Leu Phe Asp Asp Cys Ser Glu  
65 70 75 80

Ala Leu Leu Lys Val Lys Gln Ala Phe Arg Ser Ala Ala Val Asp Leu  
85 90 95

Pro Pro Glu Glu Ser Thr Ala Pro Tyr His Ser Ile Thr Leu Pro Glu  
100 105 110

Thr Phe Asp Leu Asp Asp Phe Glu Leu Pro Asp Asn Glu Ile Phe Gln  
115 120 125

Gly Asn Tyr Val Asp His His Val Ser Thr Lys Glu Gln Ile Thr Leu  
130 135 140

Gln Asp Thr Met Asp Gly Val Val Tyr Ser Thr Ser Gln Phe Gly Leu  
145 150 155 160

Asp Glu Arg Phe Gly Asp Gly Asp Thr Ser Gln Ala Ala Leu Asp Leu  
165 170 175

Asp Glu Ala Val Phe Gln Asp Lys Asp Val Ile Gly Ser Asp Asp Glu  
180 185 190

Gly Val Pro Gly Ile Asp His Asn Ala Tyr Leu Asp Ala Ala Ala Pro  
195 200 205

Gly Ile Lys Asp Ser Met Glu Gly Val Ser Glu Ala Met Pro Met Asp  
210 215 220

Phe Asn Glu Glu Gln Val Glu Asp Leu Ala Met Asn Asn Glu Phe Ile  
225 230 235 240

Glu Asp Ala Gln Ala Pro Gln Thr Pro Gly Leu Val Glu Val Pro Asn  
245 250 255

Ser Ser Ser Val Arg Glu Gln Met Ala Cys Asp Asp His Met Asp Val  
260 265 270

Glu Asp Leu Asn Ala Glu Glu Gly Ile Lys Ser Ser Gly Glu Leu Asn  
275 280 285

Ala Asn Glu Met Pro Lys Arg Gly Glu Asp Leu Ser Ser Glu Tyr Asn  
290 295 300

047-E2F-PCT.ST25.txt

Ala Pro Glu Ser Ala Val Thr Pro Val Glu Val Asp Lys Ser Gln Ile  
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Asp Glu Asn Val Asn Thr Gln Asn Glu Pro Glu Glu Glu Arg Ala Glu  
325 330 335

His Val His Val Thr Ser Pro Cys Cys Ser His Ile Thr Thr Glu Met  
340 345 350

Glu Asp Pro Gly Gln Val Met Asn Glu Ala Gly Ala Asn Val Val Pro  
355 360 365

Asp Lys Pro Asp Ala Val Pro Pro Leu Glu Thr Pro Gly Glu Glu Asn  
370 375 380

Arg Asp His Phe Ala Ile Ala Thr Glu Val Asn Gln Glu Thr Asp Ser  
385 390 395 400

Ser Leu Gln Gly Asp Glu Gln Ala Tyr Ser Arg Pro Asp Gly Gln Leu  
405 410 415

Asn Asn Ala His Glu Thr Asp Glu Gln Leu Gly Asn Leu Thr Gly Phe  
420 425 430

Thr Asp Ser Asp Phe Pro Pro Pro Glu Lys Val Leu Ala Val Pro Asn  
435 440 445

Arg Gln Gly Asp Gly Asn Asp Phe Met Val Glu Ser Thr Pro Asp Lys  
450 455 460

Glu Asp Pro Gly Thr Cys Asn Asp Asp Ala Gly Asn Asn Asn Ile Thr  
465 470 475 480

Gly Lys Lys Arg Thr Phe Thr Glu Ser Thr Leu Thr Ala Glu Ser Leu  
485 490 495

Asn Ser Val Glu Ser Val Gly Leu Ile Gln Ser Lys Arg Thr Ala Asp  
500 505 510

Ser Val Pro Asp Asp Asp Asp Leu Leu Ser Ser Ile Leu Val Gly Lys  
515 520 525

Ser Ser Phe Leu Lys Met Arg Pro Thr Pro Val Leu Glu Pro Ala Thr  
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Thr Lys Arg Leu Arg Ser Ala Pro Arg Ser Thr Ala Thr Lys Arg Lys

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Gln	Ile	Pro	Ser	Glu	Glu	Lys	Leu	Asp	Arg	Val	Glu	Asp	Leu	Gln	Val						
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Glu	Glu	Ser	His	Glu	Asn	His	Asp	Gly	Glu	Gly	Gly	Gln	Asp	Val	Cys						
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Ala	Asp	Pro	Asn	Glu	Lys	Ser	Cys	Thr	Asp	Val	Ile	Glu	Ile	Ala	Glu						
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047-E2F-PCT.ST25.txt

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Val Ser Glu Leu Gly Arg Asp Asp Gln Thr Pro Cys Asp Asn Thr Val  
820 825 830

Gly Ser Thr Glu Thr Gly Cys Leu Glu Ala Gly Asp Leu Ser Asn Met  
835 840 845

Ala Leu Glu Asn Cys Asn Glu Pro Leu Val Glu Ala Asn Ser Asp Gly  
850 855 860

Leu Asn Pro Glu Thr Glu Ser Tyr Asn Lys Tyr Glu Pro His Asn Glu  
865 870 875 880

Met Ser Asn Glu Glu Ala Ser Met Gln Asn Ala Leu Asp Gly Glu His  
885 890 895

Thr Ser Arg Asp Gly Leu Met Gly Asp Asn Asp Glu Met Asp Thr Met  
900 905 910

Glu Asn Ala His Asp Thr Gly Phe Leu Asn Val Asp Asp Asp Glu Val  
915 920 925

Asp Glu Asp His Glu Glu Asp Asp Ile Gln Tyr Asp Asp Glu Thr Arg  
930 935 940

Leu Leu Glu Asn Ser Gly Trp Ser Ser Arg Thr Arg Ala Val Ala Lys  
945 950 955 960

Tyr Leu Gln Thr Leu Phe Asp Lys Glu Thr Glu Asn Gly Lys Asn Val  
965 970 975

Leu Val Ala Asp Lys Leu Leu Ala Gly Lys Thr Arg Lys Glu Ala Ser  
980 985 990

Arg Met Phe Phe Glu Thr Leu Val Leu Lys Thr Arg Asp Tyr Ile Gln  
995 1000 1005

Val Glu Gln Gly Lys Pro Tyr Glu Ser Ile Ile Ile Lys Pro Arg  
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<210> 399

<211> 480

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 accgtcaaaa agagcaagaa tatcttggtt gtgatatacaa aacctgatgt gttcaagagt 300  
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&lt;210&gt; 400

&lt;211&gt; 159

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 400

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Lys Ile Asp Leu Asp Lys Pro Glu Val Glu Asp Asp Asp Asn Asp  
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Glu Asp Asp Ser Glu Asp Asp Asp Glu Ala Glu Gly His Asp Gly Glu  
 35 40 45

Ala Gly Gly Arg Ser Lys Gln Ser Arg Ser Glu Lys Lys Ser Arg Lys  
 50 55 60

Ala Met Leu Lys Leu Gly Met Lys Pro Ile Thr Gly Val Ser Arg Val  
 65 70 75 80

Thr Val Lys Lys Ser Lys Asn Ile Leu Phe Val Ile Ser Lys Pro Asp  
 85 90 95

Val Phe Lys Ser Pro Ala Ser Asp Thr Tyr Val Ile Phe Gly Glu Ala  
 100 105 110

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Lys Ile Glu Asp Leu Ser Ser Gln Leu Gln Ser Gln Ala Ala Glu Gln  
115 120 125

Phe Lys Ala Pro Asn Leu Ser Asn Val Ile Ser Gln Glu Lys His Arg  
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<211> 975

<212> DNA

<213> Arabidopsis thaliana

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gcggatcgtc ccatacgtgg tgataaacct gtcggtgagg ttagcgttcc ggtgaaggag 300  
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<211> 324

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 402

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20 25 30Ile Asn Gln Asp Ala Arg Thr Lys Gln Lys Thr Lys Val Asp Lys Asp  
35 40 45Cys Gly Thr Lys Pro Lys Trp Lys His Gln Met Lys Leu Thr Val Asp  
50 55 60Asp Ala Ala Ala Arg Asp Asn Arg Leu Thr Leu Val Phe Glu Ile Val  
65 70 75 80Ala Asp Arg Pro Ile Ala Gly Asp Lys Pro Val Gly Glu Val Ser Val  
85 90 95Pro Val Lys Glu Leu Leu Asp Gln Asn Lys Gly Asp Glu Glu Lys Thr  
100 105 110Val Thr Tyr Ala Val Arg Leu Pro Asn Gly Lys Ala Lys Gly Ser Leu  
115 120 125Lys Phe Ser Phe Lys Phe Gly Glu Lys Tyr Thr Tyr Gly Ser Ser Ser  
130 135 140Gly Pro His Ala Pro Val Pro Ser Ala Met Asp His Lys Thr Met Asp  
145 150 155 160Gln Pro Val Thr Ala Tyr Pro Pro Gly His Gly Ala Pro Ser Ala Tyr  
165 170 175Pro Ala Pro Pro Ala Gly Pro Ser Ser Gly Tyr Pro Pro Gln Gly His  
180 185 190Asp Asp Lys His Asp Gly Val Tyr Gly Tyr Pro Gln Gln Ala Gly Tyr  
195 200 205Pro Ala Gly Thr Gly Gly Tyr Pro Pro Pro Gly Ala Tyr Pro Gln Gln  
210 215 220



Gly Gly Tyr Pro Gly Tyr Pro Pro Gln Gln Gln Gly Gly Tyr Pro Gly  
 225 230 235 240  
 Tyr Pro Pro Gln Gly Pro Tyr Gly Tyr Pro Gln Gln Gly Tyr Pro Pro  
 245 250 255  
 Gln Gly Pro Tyr Gly Tyr Pro Gln Gln Gln Ala His Gly Lys Pro Gln  
 260 265 270  
 Lys Pro Lys Lys His Gly Lys Ala Gly Ala Gly Met Gly Leu Gly Leu  
 275 280 285  
 Gly Leu Gly Ala Gly Leu Leu Gly Gly Leu Leu Val Gly Glu Ala Val  
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Gly Phe Asp Phe

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gagtaa

&lt;210&gt; 404

&lt;211&gt; 221

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 404

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35 40 45Glu Val His Pro Leu Asp Phe Phe Thr Asn Cys Gly Lys Ile Arg Phe  
50 55 60Tyr Cys Trp Asp Thr Ala Gly Gln Glu Lys Phe Gly Gly Leu Arg Asp  
65 70 75 80Gly Tyr Tyr Ile His Gly Gln Cys Ala Ile Ile Met Phe Asp Val Thr  
85 90 95Ala Arg Leu Thr Tyr Lys Asn Val Pro Thr Trp His Arg Asp Leu Cys  
100 105 110Arg Val Cys Glu Asn Ile Pro Ile Val Leu Cys Gly Asn Lys Val Asp  
115 120 125Val Lys Asn Arg Gln Val Lys Ala Lys Gln Val Thr Phe His Arg Lys  
130 135 140Lys Asn Leu Gln Tyr Tyr Glu Ile Ser Ala Lys Ser Asn Tyr Asn Phe  
145 150 155 160Glu Lys Pro Phe Leu Tyr Leu Ala Arg Lys Leu Ala Gly Asp Gln Asn  
165 170 175Leu His Phe Val Glu Ser Pro Ala Leu Ala Pro Pro Glu Val His Leu  
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Asp Ile Ala Ala Gln Gln Gln Asn Glu Ala Asp Leu Ala Ala Ala  
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Ala Gln Pro Leu Pro Asp Asp Asp Asp Ala Phe Glu  
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<211> 918

<212> DNA

<213> *Arabidopsis thaliana*

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<211> 305

<212> PRT

<213> *Arabidopsis thaliana*

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35 40 45  
Cys Gly Asp Ile His Gly Gln Phe Tyr Asp Met Met Glu Leu Phe Lys  
50 55 60  
Val Gly Gly Asp Cys Pro Lys Thr Asn Tyr Leu Phe Met Gly Asp Phe  
65 70 75 80  
Val Asp Arg Gly Tyr Ser Val Glu Thr Phe Leu Leu Leu Ala  
85 90 95  
Leu Lys Val Arg Tyr Pro Asp Arg Ile Thr Leu Ile Arg Gly Asn His  
100 105 110  
Glu Ser Arg Gln Ile Thr Gln Val Tyr Gly Phe Tyr Asp Glu Cys Leu  
115 120 125  
Arg Lys Tyr Gly Ser Ser Asn Val Trp Arg Tyr Cys Thr Asp Ile Phe  
130 135 140  
Asp Tyr Met Ser Leu Ser Ala Val Val Glu Asn Lys Ile Phe Cys Val  
145 150 155 160  
His Gly Gly Leu Ser Pro Ala Ile Met Thr Leu Asp Gln Ile Arg Thr  
165 170 175  
Ile Asp Arg Lys Gln Glu Val Pro His Asp Gly Ala Met Cys Asp Leu  
180 185 190  
Leu Trp Ser Asp Pro Glu Asp Ile Val Asp Gly Trp Gly Leu Ser Pro  
195 200 205  
Arg Gly Ala Gly Phe Leu Phe Gly Gly Ser Val Val Thr Ser Phe Asn  
210 215 220  
His Ser Asn Asn Ile Asp Tyr Ile Ala Arg Ala His Gln Leu Val Met  
225 230 235 240  
Glu Gly Tyr Lys Trp Met Phe Asp Ser Gln Ile Val Thr Val Trp Ser  
245 250 255

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Ala Pro Asn Tyr Cys Tyr Arg Cys Gly Asn Val Ala Ser Ile Leu Glu  
260 265 270

Leu Asp Glu Asn Leu Asn Lys Glu Phe Arg Val Phe Asp Ala Ala Gln  
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Leu  
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<212> DNA

<213> Arabidopsis thaliana

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<212> PRT

<213> Arabidopsis thaliana

<400> 408

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20     25     30

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Ala Gln Arg Leu Ala Ser Tyr Thr Ala Pro Arg Ser Ile Leu Asn Asp
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Val Ala Arg Pro His Asn Glu Asp Asp Val Gly Phe Lys Pro Arg  
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100 105 110

Arg Val Leu Ser Pro Asp Arg Val Asp Ala Phe Ala Met Gly Asp Lys  
115 120 125

Thr Pro Asp Ala Ser Val Arg Thr Tyr Thr Asp His Met Arg Glu Thr  
130 135 140

Ala Leu Gln Arg Glu Lys Glu Glu Thr Met Arg Leu Ile Ala Lys Lys  
145 150 155 160

Lys Lys Glu Glu Glu Glu Ala Ala Ala Lys His Gln Lys Asp Ser Ala  
165 170 175

Pro Pro Pro Pro Ala Ser Ser Ser Ser Ser Ser Ser Lys Arg Arg His  
180 185 190

Arg Trp Asp Leu Pro Glu Glu Asp Gly Ala Ala Ala Lys Lys Ala Lys  
195 200 205

Ala Ala Ser Ser Asp Trp Asp Leu Pro Asp Ala Ala Pro Gly Ile Gly  
210 215 220

Arg Trp Asp Ala Pro Thr Pro Gly Arg Val Ser Asp Ala Thr Pro Ser  
225 230 235 240

Ala Gly Arg Arg Asn Arg Trp Asp Glu Thr Pro Thr Pro Gly Arg Val  
245 250 255

Thr Asp Ser Asp Ala Thr Pro Gly Gly Gly Val Thr Pro Gly Ala Thr  
260 265 270

Pro Ser Gly Val Thr Trp Asp Gly Leu Ala Thr Pro Thr Pro Lys Arg  
275 280 285

Gln Arg Ser Arg Trp Asp Glu Thr Pro Ala Thr Met Gly Ser Ala Thr  
290 295 300

Pro Met Gly Gly Val Thr Pro Gly Ala Ala Tyr Thr Pro Gly Val Thr  
305 310 315 320

Pro Ile Gly Gly Ile Asp Met Ala Thr Pro Thr Pro Gly Gln Leu Ile  
325 330 335



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Phe Arg Gly Pro Met Thr Pro Glu Gln Leu Asn Met Gln Arg Trp Glu  
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 370 375 380  
 Tyr Val Pro Ile Arg Thr Pro Ala Arg Lys Leu Gln Gln Thr Pro Thr  
 385 390 395 400  
 Pro Met Ala Thr Pro Gly Tyr Val Ile Pro Glu Glu Asn Arg Gly Gln  
 405 410 415  
 Gln Tyr Asp Val Pro Pro Glu Val Pro Gly Gly Leu Pro Phe Met Lys  
 420 425 430  
 Pro Glu Asp Tyr Gln Tyr Phe Gly Ser Leu Leu Asn Glu Glu Asn Glu  
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 450 455 460  
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 465 470 475 480  
 Arg Gln Leu Thr Asp Lys Ala Arg Glu Leu Gly Ala Gly Pro Leu Phe  
 485 490 495  
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 500 505 510  
 Arg His Leu Leu Val Lys Val Ile Asp Arg Ile Leu Tyr Lys Leu Asp  
 515 520 525  
 Glu Met Val Arg Pro Tyr Val His Lys Ile Leu Val Val Ile Glu Pro  
 530 535 540  
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 545 550 555 560  
 Ile Ser Asn Leu Ser Lys Ala Ala Gly Leu Ala Ser Met Ile Ala Ala  
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Ala Arg Ala Phe Ser Val Val Ala Ser Ala Leu Gly Ile Pro Ala Leu  
595 600

Leu Pro Phe Leu Lys Ala Val Cys Gln Ser Lys Arg Ser Trp Gln Ala  
610 615

Arg His Thr Gly Ile Lys Ile Val Gln Gln Ile Ala Ile Leu Ile Gly  
625 630 635

Cys Ala Val Leu Pro His Leu Arg Ser Leu Val Glu Ile Ile Glu His  
645 650 655

Gly Leu Ser Asp Glu Asn Gln Lys Val Arg Thr Ile Thr Ala Leu Ser  
660 665 670

Leu Ala Ala Leu Ala Glu Ala Ala Ala Pro Tyr Gly Ile Glu Ser Phe  
675 680 685

Asp Ser Val Leu Lys Pro Leu Trp Lys Gly Ile Arg Ser His Arg Gly  
690 695 700

Lys Val Leu Ala Ala Phe Leu Lys Ala Ile Gly Phe Ile Ile Pro Leu  
705 710 715 720

Met Asp Ala Ile Tyr Ala Ser Tyr Tyr Thr Lys Glu Val Met Val Ile  
725 730 735

Leu Ile Arg Glu Phe Gln Ser Pro Asp Glu Glu Met Lys Lys Ile Val  
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Leu Lys Val Val Lys Gln Cys Val Ser Thr Glu Gly Val Glu Pro Glu  
755 760 765

Tyr Ile Arg Ser Asp Ile Leu Pro Glu Phe Phe Arg Asn Phe Trp Thr  
770 775 780

Arg Lys Met Ala Leu Glu Arg Arg Asn Tyr Lys Gln Leu Val Glu Thr  
785 790 795 800

Thr Val Glu Val Ala Asn Lys Val Gly Val Ala Asp Ile Val Gly Arg  
805 810 815

Val Val Glu Asp Leu Lys Asp Glu Ser Glu Gln Tyr Arg Arg Met Val  
820 825 830

Met Glu Thr Ile Asp Lys Val Val Thr Asn Leu Gly Ala Ser Asp Ile  
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Asp Ala Arg Leu Glu Glu Leu Leu Ile Asp Gly Ile Leu Tyr Ala Phe  
 850 855 860

Gln Glu Gln Thr Ser Asp Asp Ala Asn Val Met Leu Asn Gly Phe Gly  
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Ala Val Val Asn Ala Leu Gly Gln Arg Val Lys Pro Tyr Leu Pro Gln  
 885 890 895

Ile Cys Gly Thr Ile Lys Trp Arg Leu Asn Asn Lys Ser Ala Lys Val  
 900 905 910

Arg Gln Gln Ala Ala Asp Leu Ile Ser Arg Ile Ala Val Val Met Lys  
 915 920 925

Gln Cys Gly Glu Glu Gln Leu Met Gly His Leu Gly Val Val Leu Tyr  
 930 935 940

Glu Tyr Leu Gly Glu Glu Tyr Pro Glu Val Leu Gly Ser Ile Leu Gly  
 945 950 955 960

Ala Leu Lys Ala Ile Val Asn Val Ile Gly Met Thr Lys Met Thr Pro  
 965 970 975

Pro Ile Lys Asp Leu Leu Pro Arg Leu Thr Pro Ile Leu Lys Asn Arg  
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His Glu Lys Val Gln Glu Asn Cys Ile Asp Leu Val Gly Arg Ile Ala  
 995 1000 1005

Asp Arg Gly Ala Glu Phe Val Pro Ala Arg Glu Trp Met Arg Ile  
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Cys Phe Glu Leu Leu Glu Met Leu Lys Ala His Lys Lys Gly Ile  
 1025 1030 1035

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Lys Ser Leu Ser Phe Leu Phe Glu Tyr Ile Gly Glu Met Gly Lys  
 1115 1120 1125

Asp Tyr Ile Tyr Ala Val Thr Pro Leu Leu Glu Asp Ala Leu Met  
 1130 1135 1140

Asp Arg Asp Leu Val His Arg Gln Thr Ala Ala Ser Ala Val Lys  
 1145 1150 1155

His Met Ala Leu Gly Val Ala Gly Leu Gly Cys Glu Asp Ala Leu  
 1160 1165 1170

Val His Leu Leu Asn Phe Ile Trp Pro Asn Ile Phe Glu Thr Ser  
 1175 1180 1185

Pro His Val Ile Asn Ala Val Met Glu Ala Ile Glu Gly Met Arg  
 1190 1195 1200

Val Ala Leu Gly Ala Ala Val Ile Leu Asn Tyr Cys Leu Gln Gly  
 1205 1210 1215

Leu Phe His Pro Ala Arg Lys Val Arg Glu Val Tyr Trp Lys Ile  
 1220 1225 1230

Tyr Asn Ser Leu Tyr Ile Gly Ala Gln Asp Thr Leu Val Ala Ala  
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Glu Leu Thr Met Phe Val  
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<212> DNA

<213> Arabidopsis thaliana

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<213> Arabidopsis thaliana

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047-E2F-PCT.ST25.txt

Arg Val Ser Cys Gln Ala Ser Ser Val Thr Ser Pro Ser Ser Pro Ser  
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Asp Val Lys Gly Lys Ser Asp Leu Lys Asp Phe Leu Ala Ile Asp Asp  
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85 90 95

Lys Ala Leu Leu Lys Ser Gly Glu Arg Asn Tyr Leu Pro Phe Lys Gly  
100 105 110

Lys Ser Met Ser Met Ile Phe Ala Lys Pro Ser Met Arg Thr Arg Val  
115 120 125

Ser Phe Glu Thr Gly Phe Phe Leu Leu Gly Gly His Ala Leu Tyr Leu  
130 135 140

Gly Pro Asn Asp Ile Gln Met Gly Lys Arg Glu Glu Thr Arg Asp Val  
145 150 155 160

Ala Arg Val Leu Ser Arg Tyr Asn Asp Ile Ile Met Ala Arg Val Phe  
165 170 175

Ala His Gln Asp Ile Leu Asp Leu Ala Asn Tyr Ser Ser Val Pro Val  
180 185 190

Val Asn Gly Leu Thr Asp His Asn His Pro Cys Gln Ile Met Ala Asp  
195 200 205

Ala Leu Thr Met Ile Glu His Ile Gly Gln Val Glu Gly Thr Lys Val  
210 215 220

Val Tyr Val Gly Asp Gly Asn Asn Met Val His Ser Trp Leu Glu Leu  
225 230 235 240

Ala Ser Val Ile Pro Phe His Phe Val Cys Ala Cys Pro Lys Gly Tyr  
245 250 255

Glu Pro Asp Lys Glu Arg Val Ser Lys Ala Lys Gln Ala Gly Leu Ser  
260 265 270

Lys Ile Glu Ile Thr Asn Asp Pro Lys Glu Ala Val Ile Gly Ala Asp  
275 280 285

Val Val Tyr Ser Asp Val Trp Ala Ser Met Gly Gln Lys Asp Glu Ala  
290 295 300

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Glu Ala Arg Arg Lys Ala Phe Gln Gly Phe Gln Val Asp Glu Ala Leu  
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Met Lys Leu Ala Gly Gln Lys Ala Tyr Phe Met His Cys Leu Pro Ala  
325 330 335

Glu Arg Gly Val Glu Val Thr Asn Gly Val Val Glu Ala Pro Tyr Ser  
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<211> 66

<212> PRT

<213> Arabidopsis thaliana

<400> 412

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20 25 30

Leu Lys Thr Leu Ser Lys Glu Glu Leu Leu Glu Leu Glu Lys Arg Leu  
Page 649

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Gln Pro  
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<212> DNA

<213> Arabidopsis thaliana

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1299

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&lt;211&gt; 432

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 414

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20 25 30Lys Asn Phe Ser Ser Gln Cys Ser Cys Glu Ile Lys Leu Arg Gly Phe  
35 40 45Pro Val Gln Thr Thr Ser Ile Pro Leu Met Pro Ser Leu Asp Ala Ala  
50 55 60Pro Asp His His Ser Ile Ser Thr Ser Phe Tyr Leu Glu Glu Ser Asp  
65 70 75 80Leu Arg Ala Leu Leu Thr Pro Gly Cys Phe Tyr Ser Pro His Ala His  
85 90 95Leu Glu Ile Ser Val Phe Thr Gly Lys Lys Ser Leu Asn Cys Gly Val  
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115 120 125Glu Trp Gly Glu Gly Lys Pro Met Ile Leu Phe Asn Gly Trp Ile Ser  
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145 150 155 160Lys Leu Asp Pro Asp Pro Arg Tyr Val Phe Gln Phe Glu Asp Val Thr  
165 170 175Thr Leu Ser Pro Gln Ile Val Gln Leu Arg Gly Ser Val Lys Gln Pro  
180 185 190

047-E2F-PCT.ST25.txt

Ile Phe Ser Cys Lys Phe Ser Arg Asp Arg Val Ser Gln Val Asp Pro  
195 200 205

Leu Asn Gly Tyr Trp Ser Ser Ser Gly Asp Gly Thr Glu Leu Glu Ser  
210 215 220

Glu Arg Arg Glu Arg Lys Gly Trp Lys Val Lys Ile His Asp Leu Ser  
225 230 235 240

Gly Ser Ala Val Ala Ala Ala Phe Ile Thr Thr Pro Phe Val Pro Ser  
245 250 255

Thr Gly Cys Asp Trp Val Ala Lys Ser Asn Pro Gly Ala Trp Leu Val  
260 265 270

Val Arg Pro Asp Pro Ser Arg Pro Asn Ser Trp Gln Pro Trp Gly Lys  
275 280 285

Leu Glu Ala Trp Arg Glu Arg Gly Ile Arg Asp Ser Val Cys Cys Arg  
290 295 300

Phe His Leu Leu Ser Asn Gly Leu Glu Val Gly Asp Val Leu Met Ser  
305 310 315 320

Glu Ile Leu Ile Ser Ala Glu Lys Gly Gly Glu Phe Leu Ile Asp Thr  
325 330 335

Asp Lys Gln Met Leu Thr Val Ala Ala Thr Pro Ile Pro Ser Pro Gln  
340 345 350

Ser Ser Gly Asp Phe Ser Gly Leu Gly Gln Cys Val Ser Gly Gly Gly  
355 360 365

Phe Val Met Ser Ser Arg Val Gln Gly Glu Gly Lys Ser Ser Lys Pro  
370 375 380

Val Val Gln Leu Ala Met Arg His Val Thr Cys Val Glu Asp Ala Ala  
385 390 395 400

Ile Phe Met Ala Leu Ala Ala Ala Val Asp Leu Ser Ile Leu Ala Cys  
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Lys Pro Phe Arg Arg Thr Ser Arg Arg Arg Phe Arg His Tyr Ser Trp  
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&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 415

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&lt;210&gt; 416

&lt;211&gt; 390

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 416

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Page 653

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Lys Gln Lys Lys Trp Trp Ile Ser Val Ser Leu Cys Ile Phe Leu Val  
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Leu Leu Gly Asp Ser Leu Val Met Leu Leu Leu Asn Phe Phe Tyr Val  
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Gln Asp Asn Arg Glu Asp Ser Asp Gln Asp Leu Gln Tyr Arg Gly Thr  
65 70 75 80  
Trp Leu Gln Ala Leu Val Gln Asn Ala Ala Phe Pro Leu Leu Ile Pro  
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Leu Phe Phe Ile Phe Pro Ser Pro Lys Gln Asn Gln Glu Thr Thr Asn  
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Thr Arg Phe Leu Ser Phe Arg Leu Ile Leu Leu Tyr Ile Ser Leu Gly  
115 120 125  
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130 135 140  
Ala Asn Phe Gly Val Phe Thr Leu Ile Ser Ala Thr Gln Leu Ile Phe  
145 150 155 160  
Thr Ala Ile Phe Ala Ala Ile Ile Asn Arg Phe Lys Phe Thr Arg Trp  
165 170 175  
Ile Ile Leu Ser Ile Ile Gly Ser Ile Leu Ile Tyr Val Phe Gly Ser  
180 185 190  
Pro Glu Phe Gly Gly Glu Pro Asp Glu Asn Glu Glu Phe Tyr Ser Ile  
195 200 205  
Gln Ala Trp Leu Thr Phe Ala Ala Ser Val Ala Phe Ala Leu Ser Leu  
210 215 220  
Cys Leu Phe Gln Leu Cys Phe Glu Lys Val Leu Val Lys Thr Lys Arg  
225 230 235 240  
Tyr Gly Asn Lys Lys Val Phe Arg Met Val Ile Glu Met Gln Ile Cys  
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Val Ser Phe Val Ala Thr Val Val Cys Leu Val Gly Leu Phe Ala Ser  
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Gly Glu Asn Lys Glu Leu Gln Gly Asp Ser His Arg Phe Lys Lys Gly  
275 280 285

Glu Thr Tyr Tyr Val Leu Ser Leu Ile Gly Leu Ala Leu Ser Trp Gln  
290 295 300

Val Trp Ala Val Gly Leu Met Gly Leu Val Leu Tyr Val Ser Gly Val  
305 310 315 320

Phe Gly Asp Val Val His Met Cys Thr Ser Pro Leu Val Ala Leu Phe  
325 330 335

Val Val Leu Ala Phe Asp Phe Met Asp Asp Glu Phe Ser Trp Pro Arg  
340 345 350

Ile Gly Thr Leu Ile Ala Thr Val Val Ala Leu Gly Ser Tyr Phe Tyr  
355 360 365

Thr Leu His Lys Arg Asn Lys Lys Lys Met Val Glu Leu Tyr Gln Thr  
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Glu Asn Asn Ile Asp Val  
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<211> 1047

<212> DNA

<213> Arabidopsis thaliana

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<211> 348

<212> PRT

<213> Arabidopsis thaliana

<400> 418

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Gly Lys Lys Arg Glu Phe Val Ser Asn Ile Val Asp Glu Ala Arg Cys  
 35 40 45

Ile Lys Arg Asn Asp Leu Val Glu Ala Leu Ser Asp Ala Leu Pro Lys  
 50 55 60

Gly Thr Ile Arg Phe Gly Ser His Ile Val Ser Ile Glu Gln Asp Lys  
 65 70 75 80

Thr Thr Leu Phe Pro Val Val His Leu Ala Asn Gly Asn Ser Ile Lys  
 85 90 95

Ala Lys Val Leu Ile Gly Cys Asp Gly Ala Asn Ser Ile Val Ser Asp  
 100 105 110

Tyr Leu Gln Leu Asn Pro Lys Lys Ala Phe Ala Cys Arg Ala Val Arg  
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047-E2F-PCT.ST25.txt

Gly Phe Thr Lys Tyr Pro Asn Gly His Gly Phe Pro Gln Glu Val Leu  
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165 170 175

Gly Lys Asp Gln Glu Ser Ile Ala Asn Leu Cys Arg Lys Trp Ala Asp  
180 185 190

Asp Leu Ser Glu Asp Trp Lys Glu Met Val Lys Ile Cys Asn Val Glu  
195 200 205

Ser Leu Thr Leu Thr His Leu Arg Tyr Arg Ala Pro Ser Glu Ile Met  
210 215 220

Leu Gly Lys Phe Arg Arg Gly Thr Val Thr Val Ala Gly Asp Ala Met  
225 230 235 240

His Val Met Gly Pro Phe Leu Ala Gln Gly Gly Ser Ala Ala Leu Glu  
245 250 255

Asp Ala Val Val Leu Ala Arg Cys Leu Ala Arg Lys Val Gly Pro Asp  
260 265 270

His Gly Asp Leu Leu Lys Asp Cys Ser Met Lys Asn Ile Glu Glu Ala  
275 280 285

Ile Asp Glu Tyr Val Asp Glu Arg Arg Met Arg Leu Leu Gly Leu Ser  
290 295 300

Val Gln Thr Tyr Leu Thr Gly Arg Ser Leu Gln Thr Ser Ser Lys Val  
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<212> DNA

<213> *Arabidopsis thaliana*

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ggtggacgtt aa 612

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&lt;210&gt; 420

&lt;211&gt; 203

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 420

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Trp Phe Asp Thr Gln Lys Gly Phe Gly Phe Ile Thr Pro Asp Asp Gly
      20      25      30

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Gly Asp Asp Leu Phe Val His Gln Ser Ser Ile Arg Ser Glu Gly Phe
      35      40      45

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Arg Ser Leu Ala Ala Glu Glu Ala Val Glu Phe Glu Val Glu Ile Asp
      50      55      60

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Asn Asn Asn Arg Pro Lys Ala Ile Asp Val Ser Gly Pro Asp Gly Ala
65      70      75      80

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Pro Val Gln Gly Asn Ser Gly Gly Gly Ser Ser Gly Gly Arg Gly Gly
      85      90      95

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Phe Gly Gly Gly Arg Gly Gly Gly Arg Gly Ser Gly Gly Gly Tyr Gly  
 100 105 110

Gly Gly Gly Gly Gly Tyr Gly Gly Arg Gly Gly Gly Gly Arg Gly Gly  
 115 120 125

Ser Asp Cys Tyr Lys Cys Gly Glu Pro Gly His Met Ala Arg Asp Cys  
 130 135 140

Ser Glu Gly Gly Gly Gly Tyr Gly Gly Gly Gly Gly Gly Tyr Gly Gly  
 145 150 155 160

Gly Gly Gly Tyr Gly Gly Gly Gly Gly Gly Tyr Gly Gly Gly Gly Arg  
 165 170 175

Gly Gly Gly Gly Gly Gly Gly Ser Cys Tyr Ser Cys Gly Glu Ser Gly  
 180 185 190

His Phe Ala Arg Asp Cys Thr Ser Gly Gly Arg  
 195 200

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<211> 384

<212> DNA

<213> Arabidopsis thaliana

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 atgtttaacg aggatcaccg tctcgccgtc aagaaagcca gcagatctga gatggttgac 240  
 ctggagggga tgggttcgga ggcgagtgtg ataatgagta atgttcacac gccaaacttct 300  
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<211> 127

<212> PRT

<213> Arabidopsis thaliana

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35 40 45Ser Gly Lys Ile Ile Met Asn His Asp Gln Gln Leu Met Phe Asn Glu  
50 55 60Asp His Arg Leu Ala Val Lys Lys Ala Ser Arg Ser Glu Met Val Asp  
65 70 75 80Leu Glu Gly Met Gly Ser Glu Ala Ser Val Ile Met Ser Asn Val Pro  
85 90 95Gln Pro Thr Ser Phe Ser Glu Asp His Lys Leu Ala Ile Lys Asn Ile  
100 105 110Ile Ser Lys Ile Val Lys Glu Ile Arg Asp Arg Asp His Pro Ala  
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&lt;210&gt; 423

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<212> PRT

<213> Arabidopsis thaliana

<400> 424

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Pro Ser Met Glu Gly Ser Phe Ala Ala Leu Arg Asn Leu Leu Lys Gln  
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Gln Glu Gly Ser Ser Ser Glu Val Leu Ser Arg Ala Ile Glu Asn Tyr  
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Asp Ser Glu Glu Glu Ile Arg Ser Asp Pro Ala Tyr Val Ala Tyr Tyr  
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Leu Ser Asn Ile Asn Leu Asn Pro Arg Leu Pro Pro Pro Leu Ile Ser  
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165 170 175

Ser Ser Gly Glu Gln Gln Ser Tyr Ala Ser Leu Ala Gly Arg Arg Lys  
180 185 190

Ser Ile Ala Asp Met Ile Gln Glu Asp Phe Pro Leu Thr Leu Ser Ser  
195 200 205

Val Phe Lys Arg Pro His Ser Ala Gly Asn Arg Pro Ile Ala Gln Asp  
210 215 220

Ile His Ala Ile Ser Ser Asp Thr Ser Ser Glu His Ala Arg Arg Leu  
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Pro Glu Ser Asp Ile Asn Ser Val Asn Leu Leu Arg Glu Thr Asp Ser  
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Leu Ser Ser Asp Ala Ile Ala Ser Glu Asp Pro Phe Thr Thr Asp Leu  
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Ala Ser Gln Ser Phe Thr Asn Ala Gln Thr Glu Arg Leu Asn Ala Arg  
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Gln Ala Ser His Glu Asp Asn Asn Leu Ser Val Phe Gly Ala Ser Pro  
290 295 300

Pro Ser Ser Val Ala Ser Arg Met Arg Arg Asn Gln Glu Asp Gln Gln  
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Ser Gln Gly Arg Arg Met Pro Pro Gln Tyr Thr Pro Ser Ser Tyr Gln  
325 330 335

Val Gln Ala Ser Ser Pro Gln Gln Met Ser Tyr Pro Arg Ile Gly Gly  
340 345 350

Thr Gln Asp Met Met Gln Ser Leu Pro Lys Ile Ala Thr Gly Glu Val  
355 360 365

His Ser Thr Phe Gln Ser Pro His Gly Leu Ala Pro Pro Pro Met Tyr  
Page 663

370

375

Thr Ser Thr Ala Ala Tyr Met Thr Ser Leu Ser Pro Phe Tyr His Gln  
385 390 395 400

Asn Phe Gln Ser Ser Gly Met Phe Val Pro Gln Tyr Asn Tyr Gly Gly  
405 410 415

Tyr Pro Pro Ala Ser Gly Ile Val Pro Gln Tyr Met Ser Gly Tyr Pro  
420 425 430

Ser His Glu Ala Thr Val Pro Met Pro Tyr Asp Ile Ser Ser Thr Ser  
435 440 445

Ser Gly Tyr Asn Asn Pro Arg Leu Leu Pro Gly Val Ser Ser Ser Gly  
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Tyr His Gln Gln Gly Pro Ser Arg Asn Thr Gly Ile Tyr Pro Gly Gly  
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Trp Gln Gly Asn Arg Gly Gly Ala Ser Ser Ile Val Asp Asp Leu Lys  
595 600 605

Arg His Ser Phe Leu Asp Glu Leu Lys Ser Pro Asn Ala Arg Lys Leu  
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 660 665 670  
 Met Thr Asp Val Phe Gly Asn Tyr Val Ile Gln Lys Phe Ile Glu His  
 675 680 685  
 Gly Thr Pro Ala Gln Arg Glu Glu Leu Val Lys Gln Leu Ala Gly Gln  
 690 695 700  
 Met Val Ser Leu Ser Leu Gln Met Tyr Gly Cys Arg Val Ile Gln Lys  
 705 710 715 720  
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 740 745 750  
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 755 760 765  
 Val Ile Ala Ala Phe Arg Gly Gln Val Ala Thr Leu Ser Thr His Pro  
 770 775  
 Tyr Gly Cys Arg Val Ile Gln Arg Ile Leu Glu His Cys Ser Asp Asp  
 785 790 795 800  
 Glu Glu Thr His Cys Ile Ile Asp Glu Ile Leu Glu Ser Ala Phe Ala  
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 Leu Ala His Asp Gln Tyr Gly Asn Tyr Val Thr Gln His Val Leu Glu  
 820 825 830  
 Arg Gly Lys Pro Asp Glu Arg Arg Gln Ile Ile Glu Lys Leu Thr Gly  
 835 840 845  
 Asn Val Val Gln Met Ser Gln His Lys Tyr Ala Ser Asn Val Val Glu  
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 Lys Cys Leu Glu His Ala Asp Ser Thr Glu Arg Glu Phe Leu Ile Glu  
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Glu Ile Met Gly Lys Ser Glu Glu Asp Asn His Leu Leu Ala Met Met  
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Lys Asp Gln Phe Ala Asn Tyr Val Val Gln Lys Val Leu Glu Ile Ser  
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Lys Asp Gln Gln Arg Glu Ile Leu Val Gln Arg Met Lys Ile His Leu  
915 920 925

Gln Ser Leu Arg Lys Tyr Thr Tyr Gly Lys His Ile Val Ala Arg Phe  
930 935 940

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<212> DNA

<213> Arabidopsis thaliana

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&lt;211&gt; 296

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 426

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85 90 95Val Phe Gln Lys Asn Asp Phe Lys Ser Gly Gly Asn Met Lys Val Asn  
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145 150 155 160Val Leu Gly Gly Tyr Ile Phe Val Cys Asn Asn Asp Thr Met Gln Glu  
165 170 175Asp Met Lys Arg His Leu Phe Gly Leu Pro Pro Arg Tyr Arg Asp Ser  
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Thr His Gln Leu His Gly Ile Phe Glu Ala Thr Thr Phe Gly Gly Thr  
210 215 220

Asn Ile Asp Ala Thr Ala Trp Glu Asp Lys Lys Cys Lys Gly Glu Ser  
225 230 235 240

Arg Phe Pro Ala Gln Val Arg Ile Arg Val Arg Lys Ile Cys Lys Ala  
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<212> PRT

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Gln Pro Tyr Arg Thr Gly Phe His Phe Gln Pro Pro Lys Asn Trp Met

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55

60

Asn Asp Pro Asn Gly Pro Met Ile Tyr Lys Gly Ile Tyr His Leu Phe  
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 Pro Thr Thr Ala Trp Leu Gly Gln Asp Lys Lys Trp Arg Val Ile Ile  
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 Gly Ser Lys Ile His Arg Arg Gly Leu Ala Ile Thr Tyr Thr Ser Lys  
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 Asp Phe Leu Lys Trp Glu Lys Ser Pro Glu Pro Leu His Tyr Asp Asp  
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 Glu Val Leu Phe Lys Val Arg Asp Leu Glu Lys Ala Asp Val Ile Glu  
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 Pro Ser Trp Thr Asp Pro Gln Leu Ile Cys Ser Lys Met Asn Val Ser  
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 Ser Ser Leu Lys Glu Asp Asn Asp Lys Thr Thr Tyr Gly Ala Phe Val  
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<213> Arabidopsis thaliana

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&lt;211&gt; 443

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 430

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20 25 30Pro Ala Arg Val Gly Arg Lys Gln Arg Lys Gln Lys Gly Pro Glu Ala  
35 40 45Ala Ala Arg Leu Pro Thr Val Thr Pro Ser Thr Lys Cys Lys Leu Arg  
50 55 60Leu Leu Lys Leu Glu Arg Ile Lys Asp Tyr Leu Leu Met Glu Glu Glu  
65 70 75 80Phe Val Ala Asn Gln Glu Arg Leu Lys Pro Gln Glu Glu Lys Ala Glu  
85 90 95Glu Asp Arg Ser Lys Val Asp Asp Leu Arg Gly Thr Pro Met Ser Val  
100 105 110Gly Asn Leu Glu Glu Leu Ile Asp Glu Asn His Ala Ile Val Ser Ser  
115 120 125Ser Val Gly Pro Glu Tyr Tyr Val Gly Ile Leu Ser Phe Val Asp Lys  
130 135 140Asp Gln Leu Glu Pro Gly Cys Ser Ile Leu Met His Asn Lys Val Leu  
145 150 155 160Ser Val Val Gly Ile Leu Gln Asp Glu Val Asp Pro Met Val Ser Val  
165 170 175Met Lys Val Glu Lys Ala Pro Leu Glu Ser Tyr Ala Asp Ile Gly Gly  
180 185 190

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Leu Glu Ala Gln Ile Gln Glu Ile Lys Glu Ala Val Glu Leu Pro Leu  
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 Thr His Pro Glu Leu Tyr Glu Asp Ile Gly Ile Lys Pro Pro Lys Gly  
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 Val Ile Leu Tyr Gly Glu Pro Gly Thr Gly Lys Thr Leu Leu Ala Lys  
 225 230 235  
 Ala Val Ala Asn Ser Thr Ser Ala Thr Phe Leu Arg Val Val Gly Ser  
 245 250 255  
 Glu Leu Ile Gln Lys Tyr Leu Gly Asp Gly Pro Lys Leu Val Arg Glu  
 260 265 270  
 Leu Phe Arg Val Ala Asp Asp Leu Ser Pro Ser Ile Val Phe Ile Asp  
 275 280 285  
 Glu Ile Asp Ala Val Gly Thr Lys Arg Tyr Asp Ala His Ser Gly Gly  
 290 295 300  
 Glu Arg Glu Ile Gln Arg Thr Met Leu Glu Leu Leu Asn Gln Leu Asp  
 305 310 315 320  
 Gly Phe Asp Ser Arg Gly Asp Val Lys Val Ile Leu Ala Thr Asn Arg  
 325 330 335  
 Ile Glu Ser Leu Asp Pro Ala Leu Leu Arg Pro Gly Arg Ile Asp Arg  
 340 345 350  
 Lys Ile Glu Phe Pro Leu Pro Asp Ile Lys Thr Arg Arg Arg Ile Phe  
 355 360 365  
 Gln Ile His Thr Ser Lys Met Thr Leu Ser Glu Asp Val Asn Leu Glu  
 370 375 380  
 Glu Phe Val Met Thr Lys Asp Glu Phe Ser Gly Ala Asp Ile Lys Ala  
 385 390 395 400  
 Ile Cys Thr Glu Ala Gly Leu Leu Ala Leu Arg Glu Arg Arg Met Lys  
 405 410 415  
 Val Thr His Pro Asp Phe Lys Lys Ala Lys Glu Lys Val Met Phe Lys  
 420 425 430  
 Lys Lys Glu Gly Val Pro Glu Gly Leu Tyr Met  
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&lt;210&gt; 431

&lt;211&gt; 1449

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 431

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gaaaagggtg ctgagtttaa ggctatagtt gaatatgcac ctctcagcg gtgtccgaaa      300
ccgagtgcata agaagatcc tcgtgaaggg tctattagta aagatcctga ttatcttgag      360
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<210> 432

<211> 482

<212> PRT

<213> *Arabidopsis thaliana*

<400> 432

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Ala Asp Arg Tyr Asn Trp Val Ser Phe Arg Pro Gly Lys Ser Ser Tyr  
35 40 45

Lys Asn Gln Lys Tyr Ser Arg Ala Tyr Val Ser Phe Lys Ala Pro Glu  
50 55 60

Asp Val Tyr Glu Phe Ala Ala Phe Phe Asn Gly His Val Phe Val Asn  
65 70 75 80

Glu Lys Gly Ala Gln Phe Lys Ala Ile Val Glu Tyr Ala Pro Ser Gln  
85 90 95

Arg Val Pro Lys Pro Ser Asp Lys Lys Asp Pro Arg Glu Gly Ser Ile  
100 105 110

Ser Lys Asp Pro Asp Tyr Leu Glu Phe Leu Lys Val Ile Ala Gln Pro  
115 120 125

Val Glu Asn Leu Pro Ser Ala Glu Ile Gln Leu Glu Arg Arg Glu Ala  
130 135 140

Glu Gln Ser Gly Ala Ser Lys Ala Ala Pro Ile Val Thr Pro Leu Met  
145 150 155 160

Glu Phe Ile Arg Gln Lys Arg Ala Thr Val Met Gly Pro Gln Gly Leu  
165 170 175

Ser Asp Ile Arg Arg Gly Gly Arg Arg Thr Arg Val Val Ser Ala Asn  
180 185 190

Lys Pro Ser Pro Arg Pro Ser Lys Arg Asn Ser Glu Lys Lys Tyr  
195 200 205

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Val Glu Lys Glu Ser Ser Lys Asn Val Pro Arg Lys Thr Thr Ala Asp  
210 215 220

Val Ser Ser Ser Lys Pro Asp Tyr Arg Gln Ser Asn Ser Ser Gly Lys  
225 230 235 240

Glu Leu Pro Gly Asn Glu Thr Ala Ala Ile Ile Asp Ser Ser Pro Pro  
245 250 255

Gly Ile Ala Leu Thr Met Asp Ser Gly Lys Lys Lys Ile Leu Leu Leu  
260 265 270

Arg Ser Lys Asp Arg Asp Asn Pro Asp Asn Pro Pro Pro Gln Pro Glu  
275 280 285

Gln His Ile Asp Thr Asn Leu Ser Arg Asn Ser Thr Asp Ser Arg Gln  
290 295 300

Asn Gln Lys Ser Asp Val Gly Gly Arg Leu Ile Lys Gly Ile Leu Leu  
305 310 315 320

Arg Asn Asp Ser Arg Pro Ser Gln Ser Ser Thr Phe Val Gln Ser Glu  
325 330 335

Gln Arg Val Glu Pro Ser Glu Ala Glu Asn Tyr Lys Arg Pro Ser Arg  
340 345 350

Pro Ala Asn Thr Arg Ala Gly Lys Asp Tyr His Thr Ser Gly Thr Ile  
355 360 365

Ser Glu Lys Gln Glu Arg Arg Thr Arg Asn Lys Asp Arg Pro Asp Arg  
370 375 380

Val Met Trp Ala Pro Arg Arg Asp Gly Ser Glu Asp Gln Pro Leu Ser  
385 390 395 400

Ser Ala Gly Asn Asn Gly Glu Val Lys Asp Arg Met Phe Ser Gln Arg  
405 410 415

Ser Gly Glu Val Val Asn Ser Ser Gly Gly His Thr Leu Glu Asn Gly  
420 425 430

Ser Ala Arg His Ser Ser Arg Arg Val Gly Gly Arg Asn Arg Lys Glu  
435 440 445

Glu Val Val Ile Gly Glu Gly Lys Thr Ser Arg Arg Gly Ser Gly Gly  
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450

455

460

Gly Pro Ser Ser His Glu Lys Gln Met Trp Ile Gln Lys Pro Ser Ser  
 465 470 475 480

Gly Thr

&lt;210&gt; 433

&lt;211&gt; 1089

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 433

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cgtaaagcaag gctatatcca acttggttac ttcagtggtc cctggattat ccgaatcact	180
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cgtcacagaa ggttggtgag tgggttggtat ctgagatggc aagaaaacgt ttgcaagtgg	300
tacatcggtt ccaatctagg atttgcggag ccttgtctct ttctgactct catgtttctt	360
ctgcgtgctc ctttgaagat ggaatcaggg gctttgagcg gaaaatggaa cagggaacaca	420
gcaggttata ttattcttta ttgtctcccg atgcttgctc ttcaacttgc ggttggtgtg	480
tccgagtcac gcctaaatgg tggtagtggc tcttatgtaa agctgccaca cgacttcaca	540
agaacgtatt cccgagttat tattgatcac gacgaggttg ccttatgcac atatcctcta	600
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ggaaggcaga tactgaaact tgcattaac aagcgtttac agaagagagt atacactttg	720
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gagaactaa	1089

&lt;210&gt; 434

&lt;211&gt; 362

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 434

Met Pro Leu Thr Lys Leu Val Pro Asp Ala Phe Gly Val Val Thr Ile  
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Cys Leu Val Ala Leu Leu Val Leu Leu Gly Leu Leu Cys Ile Ala Tyr  
 20 25 30

Ser Phe Tyr Phe Gln Ser His Val Arg Lys Gln Gly Tyr Ile Gln Leu  
 35 40 45

Gly Tyr Phe Ser Gly Pro Trp Ile Ile Arg Ile Thr Phe Ile Leu Phe  
 50 55 60

Ala Ile Trp Trp Ala Val Gly Glu Ile Phe Arg Leu Ser Leu Leu Arg  
 65 70 75 80

Arg His Arg Arg Leu Leu Ser Gly Leu Asp Leu Arg Trp Gln Glu Asn  
 85 90 95

Val Cys Lys Trp Tyr Ile Val Ser Asn Leu Gly Phe Ala Glu Pro Cys  
 100 105 110

Leu Phe Leu Thr Leu Met Phe Leu Leu Arg Ala Pro Leu Lys Met Glu  
 115 120 125

Ser Gly Ala Leu Ser Gly Lys Trp Asn Arg Asp Thr Ala Gly Tyr Ile  
 130 135 140

Ile Leu Tyr Cys Leu Pro Met Leu Ala Leu Gln Leu Ala Val Val Leu  
 145 150 155 160

Ser Glu Ser Arg Leu Asn Gly Gly Ser Gly Ser Tyr Val Lys Leu Pro  
 165 170 175

His Asp Phe Thr Arg Thr Tyr Ser Arg Val Ile Ile Asp His Asp Glu  
 180 185 190

Val Ala Leu Cys Thr Tyr Pro Leu Leu Ser Thr Ile Leu Leu Gly Val  
 195 200 205

Phe Ala Ala Val Leu Thr Ala Tyr Leu Phe Trp Leu Gly Arg Gln Ile  
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210

215

Leu Lys Leu Val Ile Asn Lys Arg Leu Gln Lys Arg Val Tyr Thr Leu  
225 230 235 240

Ile Phe Ser Val Ser Ser Phe Leu Pro Leu Arg Ile Val Met Leu Cys  
245 250 255

Leu Ser Val Leu Thr Ala Ala Asp Lys Ile Ile Phe Glu Ala Leu Ser  
260 265 270

Phe Leu Ala Phe Leu Ser Leu Phe Cys Phe Cys Val Val Ser Ile Cys  
275 280 285

Leu Leu Val Tyr Phe Pro Val Ser Asp Ser Met Ala Leu Arg Gly Leu  
290 295 300

Arg Asp Thr Asp Asp Glu Asp Thr Ala Val Thr Glu Glu Arg Ser Gly  
305 310 315 320

Ala Leu Leu Leu Ala Pro Asn Ser Ser Gln Thr Asp Glu Gly Leu Ser  
325 330 335

Leu Arg Gly Arg Arg Asp Ser Gly Ser Ser Thr Gln Glu Arg Tyr Val  
340 345 350

Glu Leu Ser Leu Phe Leu Glu Ala Glu Asn  
355 360

&lt;210&gt; 435

&lt;211&gt; 1224

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 435

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gacggaccat ccgatatccc aagctggaaa tccaacgcta cggaggagct aataaattcc 240  
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tattacaata	cgaggactga	tgatatgagc	tccttggtgt	gacctgtgat	cgatgacgtt	1140
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<210> 436

<211> 407

<212> PRT

<213> Arabidopsis thaliana

<400> 436

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			20					25					30		

Ser	Pro	Ala	Val	Glu	Asp	Gly	Leu	Val	Ile	Asn	Gly	Asp	Phe	Glu	Thr
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Ser	Pro	Ser	Ser	Gly	Phe	Pro	Asp	Asp	Gly	Val	Thr	Asp	Gly	Pro	Ser
						55					60				

Asp	Ile	Pro	Ser	Trp	Lys	Ser	Asn	Gly	Thr	Val	Glu	Leu	Ile	Asn	Ser
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Gly	Gln	Lys	Gln	Gly	Gly	Met	Ile	Leu	Ile	Val	Pro	Gln	Gly	Arg	His

Ala Val Arg Leu Gly Asn Asp Ala Glu Ile Ser Gln Asp Leu Thr Val  
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Glu Lys Gly Phe Val Tyr Ser Val Thr Phe Ser Ala Ala Arg Thr Cys  
115 120 125

Ala Gln Leu Glu Ser Ile Asn Val Ser Val Ala Ser Val Asn Ala Asp  
130 135 140

Ala Asp Asp Met Leu Ala Ser Arg Asn Val Asp Leu Gln Thr Leu Tyr  
145 150 155 160

Ser Val Gln Gly Trp Asp Pro Tyr Ala Trp Ala Phe Glu Ala Glu Asp  
165 170 175

Asp His Val Arg Leu Val Phe Lys Asn Pro Gly Met Glu Asp Asp Pro  
180 185 190

Thr Cys Gly Pro Ile Ile Asp Asp Ile Ala Ile Lys Lys Leu Phe Thr  
195 200 205

Pro Asp Lys Pro Lys Asp Asn Ala Val Ile Asn Gly Asp Phe Glu Asp  
210 215 220

Gly Pro Trp Met Phe Arg Asn Thr Ser Leu Gly Val Leu Leu Pro Thr  
225 230 235 240

Asn Leu Asp Glu Glu Ile Ser Ser Leu Pro Gly Trp Thr Val Glu Ser  
245 250 255

Asn Arg Ala Val Arg Phe Val Asp Ser Asp His Phe Ser Val Pro Lys  
260 265 270

Gly Lys Arg Ala Val Glu Leu Leu Ser Gly Lys Glu Gly Ile Ile Ser  
275 280 285

Gln Met Val Glu Thr Lys Ala Asp Lys Pro Tyr Ile Leu Ser Phe Ser  
290 295 300

Leu Gly His Ala Gly Asp Lys Cys Lys Glu Pro Leu Ala Ile Met Ala  
305 310 315 320

Phe Ala Gly Asp Gln Ala Gln Asn Phe His Tyr Met Ala Gln Ala Asn  
325 330 335



Ser Ser Phe Glu Lys Ala Gly Leu Asn Phe Thr Ala Lys Ala Asp Arg  
 340 345 350

Thr Arg Val Ala Phe Tyr Ser Val Tyr Tyr Asn Thr Arg Thr Asp Asp  
 355 360 365

Met Ser Ser Leu Cys Gly Pro Val Ile Asp Asp Val Arg Val Trp Phe  
 370 375 380

Ser Gly Ser Lys Arg Ile Gly Ala Gly Phe Gly Phe Trp Val Phe Val  
 385 390 395 400

Leu Leu Val Val Gly Leu Val  
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<210> 437

<211> 1224

<212> DNA

<213> Arabidopsis thaliana

<400> 437

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<210> 438

<211> 407

<212> PRT

<213> Arabidopsis thaliana

<400> 438

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Val Met Thr Ala Pro Val Arg Pro Asp Ile Val Asn Phe Val His Ala  
 35 40 45

Gln Ile Ser Asn Asn Ser Arg Gln Pro Tyr Ala Val Ser Lys Lys Ala  
 50 55 60

Gly His Gln Thr Ser Ala Glu Ser Trp Gly Thr Gly Arg Ala Val Ser  
 65 70 75 80

Arg Ile Pro Arg Val Pro Gly Gly Gly Thr His Arg Ala Gly Gln Ala  
 85 90 95

Ala Phe Gly Asn Met Cys Arg Gly Gly Arg Met Phe Ala Pro Thr Lys  
 100 105 110

Ile Trp Arg Arg Trp His Arg Arg Val Asn Val Asn Met Lys Arg His  
 115 120 125

Ala Ile Val Ser Ala Ile Ala Ala Thr Ala Val Pro Ala Leu Val Met  
 130 135 140

Ala Arg Gly His Lys Ile Glu Asn Val Pro Glu Met Pro Leu Val Val  
 145 150 155 160

047-E2F-PCT.ST25.txt

Ser Asp Ser Ala Glu Ala Val Glu Lys Thr Ser Ala Ala Ile Lys Val  
165 170 175

Leu Lys Gln Ile Gly Ala Tyr Asp Asp Ala Glu Lys Ala Lys Asn Ser  
180 185 190

Ile Gly Ile Arg Pro Gly Lys Gly Lys Met Arg Asn Arg Arg Tyr Ile  
195 200 205

Ser Arg Lys Gly Pro Leu Val Val Phe Gly Thr Glu Gly Ala Lys Ile  
210 215 220

Val Lys Ala Phe Arg Asn Leu Pro Gly Val Glu Leu Cys His Val Glu  
225 230 235 240

Arg Leu Asn Leu Leu Lys Leu Ala Pro Gly Gly His Leu Gly Arg Phe  
245 250 255

Val Ile Trp Thr Lys Ser Ala Phe Glu Lys Leu Glu Ser Ile Tyr Gly  
260 265 270

Ser Phe Glu Lys Pro Ser Glu Lys Lys Lys Gly Tyr Val Leu Pro Arg  
275 280 285

Ala Lys Met Val Asn Ala Asp Leu Ala Arg Ile Ile Asn Ser Asp Glu  
290 295 300

Val Gln Ser Val Val Asn Pro Ile Lys Asp Gly Ser Lys Arg Ala Val  
305 310 315 320

Leu Lys Lys Asn Pro Leu Lys Asn Leu Asn Val Met Phe Lys Leu Asn  
325 330 335

Pro Tyr Ala Lys Thr Ala Lys Arg Met Ser Leu Leu Ala Glu Ala Ser  
340 345 350

Arg Val Lys Ala Lys Lys Glu Lys Leu Glu Lys Lys Arg Lys Val Val  
355 360 365

Thr Lys Glu Glu Ala Gln Ala Ile Lys Ala Ala Gly Lys Ala Trp Tyr  
370 375 380

Gln Thr Met Ile Ser Asp Ser Asp Tyr Thr Glu Phe Asp Asn Phe Thr  
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Lys Trp Leu Gly Ala Ser Gln  
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&lt;210&gt; 439

&lt;211&gt; 2529

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 439

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047-E2F-PCT.ST25.txt

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<210> 440

<211> 842

<212> PRT

<213> Arabidopsis thaliana

<400> 440

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Asn Arg His Leu Asp Ser Ser Gly Lys Tyr Val Arg Tyr Thr Ala Glu
20          25          30

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Gln Val Glu Ala Leu Glu Arg Val Tyr Ala Glu Cys Pro Lys Pro Ser
35          40          45

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Ser Leu Arg Arg Gln Gln Leu Ile Arg Glu Cys Ser Ile Leu Ala Asn
50          55          60

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047-E2F-PCT.ST25.txt

Ile Glu Pro Lys Gln Ile Lys Val Trp Phe Gln Asn Arg Arg Cys Arg  
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Asp Lys Gln Arg Lys Glu Ala Ser Arg Leu Gln Ser Val Asn Arg Lys  
85 90 95

Leu Ser Ala Met Asn Lys Leu Leu Met Glu Glu Asn Asp Arg Leu Gln  
100 105 110

Lys Gln Val Ser Gln Leu Val Cys Glu Asn Gly Tyr Met Lys Gln Gln  
115 120 125

Leu Thr Thr Val Val Asn Asp Pro Ser Cys Glu Ser Val Val Thr Thr  
130 135 140

Pro Gln His Ser Leu Arg Asp Ala Asn Ser Pro Ala Gly Leu Leu Ser  
145 150 155 160

Ile Ala Glu Glu Thr Leu Ala Glu Phe Leu Ser Lys Ala Thr Gly Thr  
165 170 175

Ala Val Asp Trp Val Gln Met Pro Gly Met Lys Pro Gly Pro Asp Ser  
180 185 190

Val Gly Ile Phe Ala Ile Ser Gln Arg Cys Asn Gly Val Ala Ala Arg  
195 200 205

Ala Cys Gly Leu Val Ser Leu Glu Pro Met Lys Ile Ala Glu Ile Leu  
210 215 220

Lys Asp Arg Pro Ser Trp Phe Arg Asp Cys Arg Ser Leu Glu Val Phe  
225 230 235 240

Thr Met Phe Pro Ala Gly Asn Gly Gly Thr Ile Glu Leu Val Tyr Met  
245 250 255

Gln Thr Tyr Ala Pro Thr Thr Leu Ala Pro Ala Arg Asp Phe Trp Thr  
260 265 270

Leu Arg Tyr Thr Thr Ser Leu Asp Asn Gly Ser Phe Val Val Cys Glu  
275 280 285

Arg Ser Leu Ser Gly Ser Gly Ala Gly Pro Asn Ala Ala Ser Ala Ser  
290 295 300

Gln Phe Val Arg Ala Glu Met Leu Ser Ser Gly Tyr Leu Ile Arg Pro  
305 310 315 320

047-E2F-PCT.ST25.txt

Cys Asp Gly Gly Gly Ser Ile Ile His Ile Val Asp His Leu Asn Leu  
 325 330 335  
 Glu Ala Trp Ser Val Pro Asp Val Leu Arg Pro Leu Tyr Glu Ser Ser  
 340 345 350  
 Lys Val Val Ala Gln Lys Met Thr Ile Ser Ala Leu Arg Tyr Ile Arg  
 355 360 365  
 Gln Leu Ala Gln Glu Ser Asn Gly Glu Val Val Tyr Gly Leu Gly Arg  
 370 375 380  
 Gln Pro Ala Val Leu Arg Thr Phe Ser Gln Arg Leu Ser Arg Gly Phe  
 385 390 395 400  
 Asn Asp Ala Val Asn Gly Phe Gly Asp Asp Gly Trp Ser Thr Met His  
 405 410 415  
 Cys Asp Gly Ala Glu Asp Ile Ile Val Ala Ile Asn Ser Thr Lys His  
 420 425 430  
 Leu Asn Asn Ile Ser Asn Ser Leu Ser Phe Leu Gly Gly Val Leu Cys  
 435 440 445  
 Ala Lys Ala Ser Met Leu Leu Gln Asn Val Pro Pro Ala Val Leu Ile  
 450 455 460  
 Arg Phe Leu Arg Glu His Arg Ser Glu Trp Ala Asp Phe Asn Val Asp  
 465 470 475 480  
 Ala Tyr Ser Ala Ala Thr Leu Lys Ala Gly Ser Phe Ala Tyr Pro Gly  
 485 490 495  
 Met Arg Pro Thr Arg Phe Thr Gly Ser Gln Ile Ile Met Pro Leu Gly  
 500 505 510  
 His Thr Ile Glu His Glu Glu Met Leu Glu Val Val Arg Leu Glu Gly  
 515 520 525  
 His Ser Leu Ala Gln Glu Asp Ala Phe Met Ser Arg Asp Val His Leu  
 530 535 540  
 Leu Gln Ile Cys Thr Gly Ile Asp Glu Asn Ala Val Gly Ala Cys Ser  
 545 550 555 560  
 Glu Leu Ile Phe Ala Pro Ile Asn Glu Met Phe Pro Asp Asp Ala Pro

Leu Val Pro Ser Gly Phe Arg Val Ile Pro Val Asp Ala Lys Thr Gly  
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 Asp Val Gln Asp Leu Leu Thr Ala Asn His Arg Thr Leu Asp Leu Thr  
 595 600 605  
 Ser Ser Leu Glu Val Gly Pro Ser Pro Glu Asn Ala Ser Gly Asn Ser  
 610 615 620  
 Phe Ser Ser Ser Ser Ser Arg Cys Ile Leu Thr Ile Ala Phe Gln Phe  
 625 630 635  
 Pro Phe Glu Asn Asn Leu Gln Glu Asn Val Ala Gly Met Ala Cys Gln  
 645 650 655  
 Tyr Val Arg Ser Val Ile Ser Ser Val Gln Arg Val Ala Met Ala Ile  
 660 665 670  
 Ser Pro Ser Gly Ile Ser Pro Ser Leu Gly Ser Lys Leu Ser Pro Gly  
 675 680 685  
 Ser Pro Glu Ala Val Thr Leu Ala Gln Trp Ile Ser Gln Ser Tyr Ser  
 690 695 700  
 His His Leu Gly Ser Glu Leu Leu Thr Ile Asp Ser Leu Gly Ser Asp  
 705 710 715 720  
 Asp Ser Val Leu Lys Leu Leu Trp Asp His Gln Asp Ala Ile Leu Cys  
 725 730 735  
 Cys Ser Leu Lys Pro Gln Pro Val Phe Met Phe Ala Asn Gln Ala Gly  
 740 745 750  
 Leu Asp Met Leu Glu Thr Thr Leu Val Ala Leu Gln Asp Ile Thr Leu  
 755 760 765  
 Glu Lys Ile Phe Asp Glu Ser Gly Arg Lys Ala Ile Cys Ser Asp Phe  
 770 775 780  
 Ala Lys Leu Met Gln Gln Gly Phe Ala Cys Leu Pro Ser Gly Ile Cys  
 785 790 795 800  
 Val Ser Thr Met Gly Arg His Val Ser Tyr Glu Gln Ala Val Ala Trp  
 805 810 815



Lys Val Phe Ala Ala Ser Glu Glu Asn Asn Asn Asn Leu His Cys Leu  
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Ala Phe Ser Phe Val Asn Trp Ser Phe Val  
 835 840

<210> 441

<211> 588

<212> DNA

<213> Arabidopsis thaliana

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 aacttcagtg ctaatgtggt tgttgatggc aacactgtca atcttgatt gtgggatact 180  
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 cctgagctca ggcattatgc tcctggtggt cccattatcc ttgttgggac aaaactcgat 360  
 cttcgagatg acaagcaatt ctttatagat catcctggtg ctgtgccaat tactacaaac 420  
 cagggagagg aactgaagaa actgattgga tctgctgtct acattgaatg tagttcaaag 480  
 acacagcaga acgtgaaggc agtgtttgat gcagctataa aagtgggtct tcagccacca 540  
 aagcagaaga agaagaaaaa gaataagaac cgttgcgcgt tcttgtga 588

<210> 442

<211> 195

<212> PRT

<213> Arabidopsis thaliana

<400> 442

Met Ala Ser Arg Phe Ile Lys Cys Val Thr Val Gly Asp Gly Ala Val  
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Gly Lys Thr Cys Met Leu Ile Ser Tyr Thr Ser Asn Thr Phe Pro Thr  
 20 25 30

Asp Tyr Val Pro Thr Val Phe Asp Asn Phe Ser Ala Asn Val Val Val  
 35 40 45

047-E2F-PCT.ST25.txt

Asp Gly Asn Thr Val Asn Leu Gly Leu Trp Asp Thr Ala Gly Gln Glu  
50 55 60

Asp Tyr Asn Arg Leu Arg Pro Leu Ser Tyr Arg Gly Ala Asp Val Phe  
65 70 75 80

Ile Leu Ala Phe Ser Leu Ile Ser Lys Ala Ser Tyr Glu Asn Ile Ala  
85 90 95

Lys Lys Trp Ile Pro Glu Leu Arg His Tyr Ala Pro Gly Val Pro Ile  
100 105 110

Ile Leu Val Gly Thr Lys Leu Asp Leu Arg Asp Asp Lys Gln Phe Phe  
115 120 125

Ile Asp His Pro Gly Ala Val Pro Ile Thr Thr Asn Gln Gly Glu Glu  
130 135 140

Leu Lys Lys Leu Ile Gly Ser Ala Val Tyr Ile Glu Cys Ser Ser Lys  
145 150 155 160

Thr Gln Gln Asn Val Lys Ala Val Phe Asp Ala Ala Ile Lys Val Val  
165 170 175

Leu Gln Pro Pro Lys Gln Lys Lys Lys Lys Asn Lys Asn Arg Cys  
180 185 190

Ala Phe Leu  
195

<210> 443

<211> 822

<212> DNA

<213> Arabidopsis thaliana

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cctgataatt tgggctccca ccgtgtgttg agtttcacag aagatgcagc accgggctct	660
gctccttcgc cgggatctgc tccggcgccg ggcaccagtg gctcgactac cccaggaaca	720
gcggcgggag gtccaggga cgcgggggtca ttgacgagga acgtaaattt tgggggtcaat	780
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&lt;210&gt; 444

&lt;211&gt; 273

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 444

Met Ser Leu Cys	Leu Lys Ile Pro Leu	Ile Lys His Gln Thr	Thr Pro
1	5	10	15

Glu Gln Asn Ser	Ala Met Ala Ser	Ser Ser Ser Ser	Leu Leu Ile Leu
20	25	30	

Ala Val	Ala Cys Phe Val	Ser Leu Ile Ser Pro	Ala Ile Ser Gln Gln
35	40	45	

Ala Cys	Lys Ser Gln Asn	Leu Asn Ser Ala Gly	Pro Phe Asp Ser Cys
50	55	60	

Glu Asp Leu Pro Val	Leu Asn Ser Tyr Leu	His Tyr Thr Tyr Asn Ser
65	70	75

Ser Asn Ser Ser	Leu Ser Val Ala Phe	Val Ala Thr Pro Ser	Gln Ala
85	90	95	

Asn Gly Gly Trp Val	Ala Trp Ala Ile	Asn Pro Thr Gly Thr	Lys Met
100	105	110	

Ala Gly Ser Gln Ala	Phe Leu Ala Tyr Arg Ser Gly	Gly Gly Ala Ala
115	120	125

Pro Val Val Lys Thr Tyr Asn Ile Ser	Ser Tyr Ser Ser Leu Val Glu
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130

135

140

Gly Lys Leu Ala Phe Asp Phe Trp Asn Leu Arg Ala Glu Ser Leu Ser  
 145 150 155 160

Gly Gly Arg Ile Ala Ile Phe Thr Thr Val Lys Val Pro Ala Gly Ala  
 165 170 175

Asp Ser Val Asn Gln Val Trp Gln Ile Gly Gly Asn Val Thr Asn Gly  
 180 185 190

Arg Pro Gly Val His Pro Phe Gly Pro Asp Asn Leu Gly Ser His Arg  
 195 200 205

Val Leu Ser Phe Thr Glu Asp Ala Ala Pro Gly Ser Ala Pro Ser Pro  
 210 215 220

Gly Ser Ala Pro Ala Pro Gly Thr Ser Gly Ser Thr Thr Pro Gly Thr  
 225 230 235 240

Ala Ala Gly Gly Pro Gly Asn Ala Gly Ser Leu Thr Arg Asn Val Asn  
 245 250 255

Phe Gly Val Asn Leu Gly Ile Leu Val Leu Leu Gly Ser Ile Phe Ile  
 260 265 270

Phe

&lt;210&gt; 445

&lt;211&gt; 411

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 445

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 ttgccgtgtc cgtgtgcacc acctcgacct gaaaaactca ccgtagatgt ccaactccg 360  
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&lt;210&gt; 446

&lt;211&gt; 136

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 446

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20 25 30Phe Ser Leu Ser Gly Ile Phe Ser Cys Cys Tyr His Trp Asp Lys His  
35 40 45Arg Ser Leu Arg Arg Ser Leu Ala Asn Gly Arg Pro Ser Ala Asp Ile  
50 55 60Glu Ser Asn Pro Tyr Lys Pro Lys Pro Pro Phe Pro Glu Met Lys Lys  
65 70 75 80Pro Gln Asn Leu Ser Val Pro Val Leu Met Pro Gly Asp Asn Thr Pro  
85 90 95Lys Phe Ile Ala Leu Pro Cys Pro Cys Ala Pro Pro Arg Pro Glu Lys  
100 105 110Leu Thr Val Asp Val Gln Thr Pro Pro Gln Ser Pro Pro Val Lys Pro  
115 120 125Ala Arg Phe Pro Val Pro Leu Tyr  
130 135

&lt;210&gt; 447

&lt;211&gt; 1569

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 447

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&lt;210&gt; 448

&lt;211&gt; 522

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 448

Met Asp Ser Gln Gln Leu Ala Leu Asp Cys Ile Val Ala Thr Leu Phe  
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Asp Gly Ser Asn Glu Phe Ala Gly Gly Ser Ser Glu Val His Tyr Ala  
 20 25 30

Leu Arg Gly Ile Phe Glu Gly Leu Leu Gln Gln Leu Leu Ser Leu Lys  
 35 40 45

Trp Asn Glu Pro Glu Leu Met Lys Val His Val His Tyr Leu Asp Ala  
 50 55 60

Met Gly Pro Phe Leu Lys Tyr Phe Pro Asp Ala Val Gly Ser Leu Ile  
 65 70 75 80

Asn Lys Leu Phe Glu Leu Leu Thr Ser Leu Pro His Val Val Lys Asp  
 85 90 95

Pro Ala Thr Ser Thr Ser Arg Ala Ala Arg Leu Gln Ile Cys Thr Ser  
 100 105 110

Phe Ile Arg Ile Ala Lys Ala Ala Glu Lys Ser Val Leu Pro His Met  
 115 120 125

Lys Gly Ile Ala Asp Thr Met Gly Tyr Leu Ala Lys Glu Gly Thr Leu  
 130 135 140

Leu Arg Gly Glu His Asn Ile Leu Gly Glu Ala Phe Leu Val Met Ala  
 145 150 155 160

Ser Ser Ala Gly Ala Gln Gln Gln Glu Val Leu Ala Trp Leu Leu  
 165 170 175

Glu Pro Leu Ser Gln Gln Trp Ile Gln Pro Glu Trp Gln Asn Asn Tyr  
 180 185 190

Leu Ser Asp Pro Met Gly Leu Leu Leu Arg Val Leu His Ser Leu Trp  
 195 200 205

Ser Pro Ser Val Phe Gln Thr Leu Pro Pro Glu Met Arg Ala Ala Met  
 210 215 220

Thr Met Thr Asp Ala Glu Arg Tyr Ser Leu Leu Gly Glu Ala Asn Pro  
 225 230 235 240

Lys Leu Ser Lys Gly Val Ser Val Tyr Ala Asp Gly Ser Phe Glu Gly  
 Page 697

Thr Lys Glu Gly Gln Ala Glu Ala Ser Glu Ser Asp Ile Arg Asn Trp  
 260 265 270  
 Leu Lys Gly Ile Arg Asp Cys Gly Tyr Asn Val Leu Gly Leu Ser Thr  
 275 280  
 Thr Ile Gly Glu Thr Phe Phe Lys Cys Leu Asp Ala Asn Tyr Val Ala  
 290 295 300  
 Met Ala Leu Met Glu Asn Leu Gln Ser Met Glu Phe Arg His Ile Arg  
 305 310 315 320  
 Leu Phe Ile His Thr Phe Ile Thr Tyr Ile Val Lys Ser Cys Pro Ala  
 325 330 335  
 Asp Met Trp Glu Ser Trp Leu Gly Val Leu Leu His Pro Leu Phe Ile  
 340 345 350  
 His Cys Gln Gln Ala Leu Ser Ser Ala Trp Pro Gly Leu Leu Gln Glu  
 355 360 365  
 Gly Arg Ala Lys Val Pro Asp Leu Phe Gly Ile Gln Ser Gly Ser Asp  
 370 375 380  
 Met Lys Leu Glu Val Met Glu Glu Lys Leu Leu Arg Asp Leu Thr Arg  
 385 390 395 400  
 Glu Ile Ala Thr Leu Phe Ser Thr Met Ala Ser Pro Gly Leu Asn Thr  
 405 410 415  
 Gly Val Pro Val Leu Glu His Ser Gly His Val Gly Arg Val Asp Met  
 420 425 430  
 Ser Thr Leu Thr Asp Leu His Ala Phe Arg Ser Asn Ser Met Val Leu  
 435 440 445  
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 450 455 460  
 Ala Thr Ala Lys Thr Ser Ser Pro Lys Glu Gln Lys Gln Leu Met Arg  
 465 470 475 480  
 Ser Leu Leu Leu Leu Gly Thr Gly Asn Asn Leu Lys Ala Leu Ala Ala  
 485 490 495



Gln Lys Ser Gln Asn Val Ile Thr Asn Val Thr Gly Asn Lys Val Ser  
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<210> 449

<211> 2853

<212> DNA

<213> *Arabidopsis thaliana*

<400> 449

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&lt;210&gt; 450

&lt;211&gt; 950

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 450

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20      25      30

Arg Arg Ser Phe Phe Arg Phe Pro Leu Thr Asp Pro Leu Cys Arg Leu
35      40      45

Arg Arg Thr Glu Pro Ser Ala Thr Arg Phe Phe Ser Ser Arg Thr Pro
50      55      60

Arg Ser Gly Lys Phe Val Val Gly Ala Gly Lys Arg Gly Asp Glu Gln
65      70      75      80

Val Lys Glu Glu Ser Gly Ala Asn Asn Gly Gly Leu Val Val Ser Gly
85      90      95

Asp Glu Ser Arg Ile Val Pro Phe Glu Leu His Lys Glu Ala Thr Glu
100     105     110

Ser Tyr Met Ser Tyr Ala Leu Ser Val Leu Leu Gly Arg Ala Leu Pro
115     120     125

Asp Val Arg Asp Gly Leu Lys Pro Val His Arg Arg Ile Leu Phe Ala
130     135     140

Met His Glu Leu Gly Met Ser Ser Lys Lys Pro Tyr Lys Lys Cys Ala
145     150     155     160

Arg Val Val Gly Glu Val Leu Gly Lys Phe His Pro His Gly Asp Thr
165     170     175

Ala Val Tyr Asp Ser Leu Val Arg Met Ala Gln Ser Phe Ser Leu Arg
180     185     190

Cys Pro Leu Ile Gln Gly His Gly Asn Phe Gly Ser Ile Asp Ala Asp
195     200     205

Pro Pro Ala Ala Met Arg Tyr Thr Glu Cys Arg Leu Asp Pro Leu Ala
210     215     220

Glu Ala Val Leu Leu Ser Asp Leu Asp Gln Asp Thr Val Asp Phe Val
225     230     235     240

Ala Asn Phe Asp Asn Ser Gln Lys Glu Pro Ala Val Leu Pro Ala Arg
245     250     255     260     265     270

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Leu Pro Ala Leu Leu Leu Asn Gly Ala Ser Gly Ile Ala Val Gly Met  
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 Cys Ala Leu Ile His Asn Pro Glu Ala Thr Leu Gln Glu Leu Leu Glu  
 290 295 300  
 Tyr Met Pro Ala Pro Asp Phe Pro Thr Gly Gly Ile Ile Met Gly Asn  
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 Leu Gly Val Leu Asp Ala Tyr Arg Thr Gly Arg Gly Arg Val Val Val  
 325 330 335  
 Arg Gly Lys Ala Glu Val Glu Leu Leu Asp Pro Lys Thr Lys Arg Asn  
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 Ala Val Ile Ile Thr Glu Ile Pro Tyr Gln Thr Asn Lys Ala Thr Leu  
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 Val Gln Lys Ile Ala Glu Leu Val Glu Asn Lys Thr Leu Glu Gly Ile  
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 Cys Asp Gly Glu Pro Lys Leu Met Gly Leu Lys Glu Leu Leu Gln Ala  
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 Gly Tyr Val 610 Lys Arg Met Lys 615 Ala Asp Thr Phe Asn 620 Leu Gln His Arg  
 Gly Thr 625 Ile Gly Lys Ser 630 Val Gly Lys Leu Arg 635 Val Asp Asp Ala Met 640  
 Ser Asp Phe Leu Val 645 Cys His Ala His Asp 650 His Val Leu Phe Phe Ser 655  
 Asp Arg Gly Ile Val 660 Tyr Ser Thr Arg 665 Ala Tyr Lys Ile Pro 670 Glu Cys  
 Ser Arg Asn 675 Ala Ala Gly Thr Pro 680 Leu Val Gln Ile Leu 685 Ser Met Ser  
 Glu Gly 690 Glu Arg Val Thr Ser 695 Ile Val Pro Val Ser 700 Glu Phe Ala Glu  
 Asp Arg Tyr Leu Leu 705 Met Leu Thr Val Asn Gly 715 Cys Ile Lys Lys Val 720  
 Ser Leu Lys Leu Phe 725 Ser Gly Ile Arg Ser 730 Thr Gly Ile Ile Ala 735 Ile  
 Gln Leu Asn Ser 740 Gly Asp Glu Leu Lys 745 Trp Val Arg Cys Cys 750 Ser Ser

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Asp Asp Leu Val Ala Met Ala Ser Gln Asn Gly Met Val Ala Leu Ser  
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Thr Cys Asp Gly Val Arg Thr Leu Ser Arg Asn Thr Lys Gly Val Thr  
770 775 780

Ala Met Arg Leu Lys Asn Glu Asp Lys Ile Ala Ser Met Asp Ile Ile  
785 790 795 800

Pro Ala Ser Leu Arg Lys Asp Met Glu Glu Lys Ser Glu Asp Ala Ser  
805 810 815

Leu Val Lys Gln Ser Thr Gly Pro Trp Leu Leu Phe Val Cys Glu Asn  
820 825 830

Gly Tyr Gly Lys Arg Val Pro Leu Ser Ser Phe Arg Arg Ser Arg Leu  
835 840 845

Asn Arg Val Gly Leu Ser Gly Tyr Lys Phe Ala Glu Asp Asp Arg Leu  
850 855 860

Ala Ala Val Phe Val Val Gly Tyr Ser Leu Ala Glu Asp Gly Glu Ser  
865 870 875 880

Asp Glu Gln Val Val Leu Val Ser Gln Ser Gly Thr Val Asn Arg Ile  
885 890 895

Lys Val Arg Asp Ile Ser Ile Gln Ser Arg Arg Ala Arg Gly Val Ile  
900 905 910

Leu Met Arg Leu Asp His Ala Gly Lys Ile Gln Ser Ala Ser Leu Ile  
915 920 925

Ser Ala Ala Asp Glu Glu Glu Thr Glu Gly Thr Leu Ser Asn Glu Ala  
930 935 940

Val Glu Ala Val Ser Leu  
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<210> 451

<211> 2553

<212> DNA

<213> Arabidopsis thaliana

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<211> 850

<212> PRT

<213> *Arabidopsis thaliana*

<400> 452

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Ile Leu Arg His Leu Asn Ala Gly Asp Leu Arg Gly Ala Val Ser Ala  
 35 40 45

Leu Asp Leu Met Ala Arg Asp Gly Ile Arg Pro Met Asp Ser Val Thr  
 50 55 60

Phe Ser Ser Leu Leu Lys Ser Cys Ile Arg Ala Arg Asp Phe Arg Leu  
 65 70 75 80

Gly Lys Leu Val His Ala Arg Leu Ile Glu Phe Asp Ile Glu Pro Asp  
 85 90 95

Ser Val Leu Tyr Asn Ser Leu Ile Ser Leu Tyr Ser Lys Ser Gly Asp  
 100 105 110



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Ser Ala Lys Ala Glu Asp Val Phe Glu Thr Met Arg Arg Phe Gly Lys  
115 120 125

Arg Asp Val Val Ser Trp Ser Ala Met Met Ala Cys Tyr Gly Asn Asn  
130 135 140

Gly Arg Glu Leu Asp Ala Ile Lys Val Phe Val Glu Phe Leu Glu Leu  
145 150 155 160

Gly Leu Val Pro Asn Asp Tyr Cys Tyr Thr Ala Val Ile Arg Ala Cys  
165 170 175

Ser Asn Ser Asp Phe Val Gly Val Gly Arg Val Thr Leu Gly Phe Leu  
180 185 190

Met Lys Thr Gly His Phe Glu Ser Asp Val Cys Val Gly Cys Ser Leu  
195 200 205

Ile Asp Met Phe Val Lys Gly Glu Asn Ser Phe Glu Asn Ala Tyr Lys  
210 215 220

Val Phe Asp Lys Met Ser Glu Leu Asn Val Val Thr Trp Thr Leu Met  
225 230 235 240

Ile Thr Arg Cys Met Gln Met Gly Phe Pro Arg Glu Ala Ile Arg Phe  
245 250 255

Phe Leu Asp Met Val Leu Ser Gly Phe Glu Ser Asp Lys Phe Thr Leu  
260 265 270

Ser Ser Val Phe Ser Ala Cys Ala Glu Leu Glu Asn Leu Ser Leu Gly  
275 280 285

Lys Gln Leu His Ser Trp Ala Ile Arg Ser Gly Leu Val Asp Asp Val  
290 295 300

Glu Cys Ser Leu Val Asp Met Tyr Ala Lys Cys Ser Ala Asp Gly Ser  
305 310 315 320

Val Asp Asp Cys Arg Lys Val Phe Asp Arg Met Glu Asp His Ser Val  
325 330 335

Met Ser Trp Thr Ala Leu Ile Thr Gly Tyr Met Lys Asn Cys Asn Leu  
340 345 350

Ala Thr Glu Ala Ile Asn Leu Phe Ser Glu Met Ile Thr Gln Gly His

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 Val Glu Pro Asn His Phe Thr Phe Ser Ser Ala Phe Lys Ala Cys Gly  
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 385 390 395 400  
 Lys Arg Gly Leu Ala Ser Asn Ser Ser Val Ala Asn Ser Val Ile Ser  
 405 410 415  
 Met Phe Val Lys Ser Asp Arg Met Glu Asp Ala Gln Arg Ala Phe Glu  
 420 425 430  
 Ser Leu Ser Glu Lys Asn Leu Val Ser Tyr Asn Thr Phe Leu Asp Gly  
 435 440 445  
 Thr Cys Arg Asn Leu Asn Phe Glu Gln Ala Phe Lys Leu Leu Ser Glu  
 450 455 460  
 Ile Thr Glu Arg Glu Leu Gly Val Ser Ala Phe Thr Phe Ala Ser Leu  
 465 470 475 480  
 Leu Ser Gly Val Ala Asn Val Gly Ser Ile Arg Lys Gly Glu Gln Ile  
 485 490 495  
 His Ser Gln Val Val Lys Leu Gly Leu Ser Cys Asn Gln Pro Val Cys  
 500 505 510  
 Asn Ala Leu Ile Ser Met Tyr Ser Lys Cys Gly Ser Ile Asp Thr Ala  
 515 520 525  
 Ser Arg Val Phe Asn Phe Met Glu Asn Arg Asn Val Ile Ser Trp Thr  
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 Ser Met Ile Thr Gly Phe Ala Lys His Gly Phe Ala Ile Arg Val Leu  
 545 550 555 560  
 Glu Thr Phe Asn Gln Met Ile Glu Glu Gly Val Lys Pro Asn Glu Val  
 565 570 575  
 Thr Tyr Val Ala Ile Leu Ser Ala Cys Ser His Val Gly Leu Val Ser  
 580 585 590  
 Glu Gly Trp Arg His Phe Asn Ser Met Tyr Glu Asp His Lys Ile Lys  
 595 600 605

Pro Lys Met Glu His Tyr Ala Cys Met Val Asp Leu Leu Cys Arg Ala  
 610 615 620

Gly Leu Leu Thr Asp Ala Phe Glu Phe Ile Asn Thr Met Pro Phe Gln  
 625 630 635 640

Ala Asp Val Leu Val Trp Arg Thr Phe Leu Gly Ala Cys Arg Val His  
 645 650 655

Ser Asn Thr Glu Leu Gly Lys Leu Ala Ala Arg Lys Ile Leu Glu Leu  
 660 665 670

Asp Pro Asn Glu Pro Ala Ala Tyr Ile Gln Leu Ser Asn Ile Tyr Ala  
 675 680 685

Cys Ala Gly Lys Trp Glu Glu Ser Thr Glu Met Arg Arg Lys Met Lys  
 690 695 700

Glu Arg Asn Leu Val Lys Glu Gly Gly Cys Ser Trp Ile Glu Val Gly  
 705 710 715 720

Asp Lys Ile His Lys Phe Tyr Val Gly Asp Thr Ala His Pro Asn Ala  
 725 730 735

His Gln Ile Tyr Asp Glu Leu Asp Arg Leu Ile Thr Glu Ile Lys Arg  
 740 745 750

Cys Gly Tyr Val Pro Asp Thr Asp Leu Val Leu His Lys Leu Glu Glu  
 755 760 765

Glu Asn Asp Glu Ala Glu Lys Glu Arg Leu Leu Tyr Gln His Ser Glu  
 770 775 780

Lys Ile Ala Val Ala Phe Gly Leu Ile Ser Thr Ser Lys Ser Arg Pro  
 785 790 795 800

Val Arg Val Phe Lys Asn Leu Arg Val Cys Gly Asp Cys His Asn Ala  
 805 810 815

Met Lys Tyr Ile Ser Thr Val Ser Gly Arg Glu Ile Val Leu Arg Asp  
 820 825 830

Leu Asn Arg Phe His His Phe Lys Asp Gly Lys Cys Ser Cys Asn Asp  
 835 840 845

Tyr Trp  
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&lt;210&gt; 453

&lt;211&gt; 666

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 453

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&lt;210&gt; 454

&lt;211&gt; 221

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 454

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Met Asp Ser Ile Lys Ser His Tyr Val Thr Asp Ser Val Ser Glu Glu
20          25          30

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Arg Arg Ser Arg Glu Leu Lys Asp Gly Asp His Pro Leu Arg Tyr Lys
35          40          45

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Phe Ser Ile Trp Tyr Thr Arg Arg Thr Pro Gly Val Arg Asn Gln Ser
50          55          60

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Tyr Glu Asp Asn Ile Lys Lys Met Val Glu Phe Ser Thr Val Glu Gly  
65 70 75 80

Phe Trp Ala Cys Tyr Cys His Leu Ala Arg Ser Ser Leu Leu Pro Ser  
85 90 95

Pro Thr Asp Leu His Phe Phe Lys Asp Gly Ile Arg Pro Leu Trp Glu  
100 105 110

Asp Gly Ala Asn Cys Asn Gly Gly Lys Trp Ile Ile Arg Phe Ser Lys  
115 120 125

Val Val Ser Ala Arg Phe Trp Glu Asp Leu Leu Leu Ala Leu Val Gly  
130 135 140

Asp Gln Leu Asp Asp Ala Asp Asn Ile Cys Gly Ala Val Leu Ser Val  
145 150 155 160

Arg Phe Asn Glu Asp Ile Ile Ser Val Trp Asn Arg Asn Ala Ser Asp  
165 170 175

His Gln Ala Val Met Gly Leu Arg Asp Ser Ile Lys Arg His Leu Lys  
180 185 190

Leu Pro His Ala Tyr Val Met Glu Tyr Lys Pro His Asp Ala Ser Leu  
195 200 205

Arg Asp Asn Ser Ser Tyr Arg Asn Thr Trp Leu Arg Gly  
210 215 220

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<211> 1668

<212> DNA

<213> Arabidopsis thaliana

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gtgttctcaa ggataatggc ttctgatggc gaggagcgtg aaatccaaaa gaattactgg 240  
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&lt;210&gt; 456

&lt;211&gt; 555

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 456

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Ile Glu Arg Glu Ser Asn Leu Gly Ser Ala Ser Val Leu Met Gln Ser  
 20 25 30  
 Lys Val Ile Ser Val Ser Asn Phe Phe Ser Ile His Arg Phe His Tyr  
 35 40 45  
 Pro Arg Glu Lys Ile Val Ser Phe Leu Phe Pro Ser Val Phe Ser Arg  
 50 55 60  
 Ile Met Ala Ser Tyr Gly Glu Glu Arg Glu Ile Gln Lys Asn Tyr Trp  
 65 70 75 80  
 Lys Glu His Ser Val Gly Leu Ser Val Glu Ala Met Met Leu Asp Ser  
 85 90 95  
 Lys Ala Ser Asp Leu Asp Lys Glu Glu Arg Pro Glu Ile Leu Ala Phe  
 100 105 110  
 Leu Pro Pro Ile Glu Gly Thr Thr Val Leu Glu Phe Gly Ala Gly Ile  
 115 120 125  
 Gly Arg Phe Thr Thr Glu Leu Ala Gln Lys Ala Gly Gln Val Ile Ala  
 130 135 140  
 Val Asp Phe Ile Glu Ser Val Ile Lys Lys Asn Glu Asn Ile Asn Gly  
 145 150 155 160  
 His Tyr Lys Asn Val Lys Phe Leu Cys Ala Asp Val Thr Ser Pro Asn  
 165 170 175  
 Met Asn Phe Pro Asn Glu Ser Met Asp Leu Ile Phe Ser Asn Trp Leu  
 180 185 190  
 Leu Met Tyr Leu Ser Asp Gln Glu Val Glu Asp Leu Ala Lys Lys Met  
 195 200 205  
 Leu Gln Trp Thr Lys Val Gly Gly Tyr Ile Phe Phe Arg Glu Ser Cys  
 210 215 220  
 Phe His Gln Ser Gly Asp Asn Lys Arg Lys Tyr Asn Pro Thr His Tyr  
 225 230 235 240  
 Arg Glu Pro Lys Phe Tyr Thr Lys Leu Phe Lys Glu Cys His Met Asn  
 245 250 255  
 Asp Glu Asp Gly Asn Ser Tyr Glu Leu Ser Leu Val Ser Cys Lys Cys  
 260 265 270

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Ile Gly Ala Tyr Val Arg Asn Lys Lys Asn Gln Asn Gln Ile Cys Trp  
275 280 285

Leu Trp Gln Lys Val Ser Ser Asp Asn Asp Arg Gly Phe Gln Arg Phe  
290 295 300

Leu Asp Asn Val Gln Tyr Lys Ser Ser Gly Ile Leu Arg Tyr Glu Arg  
305 310 315 320

Val Phe Gly Glu Gly Phe Val Ser Thr Gly Gly Leu Glu Thr Thr Lys  
325 330 335

Glu Phe Val Asp Met Leu Asp Leu Lys Pro Gly Gln Lys Val Leu Asp  
340 345 350

Val Gly Cys Gly Ile Gly Gly Gly Asp Phe Tyr Met Ala Glu Asn Phe  
355 360 365

Asp Val Asp Val Val Gly Ile Asp Leu Ser Val Asn Met Ile Ser Phe  
370 375 380

Ala Leu Glu His Ala Ile Gly Leu Lys Cys Ser Val Glu Phe Glu Val  
385 390 395 400

Ala Asp Cys Thr Lys Lys Glu Tyr Pro Asp Asn Thr Phe Asp Val Ile  
405 410 415

Tyr Ser Arg Asp Thr Ile Leu His Ile Gln Asp Lys Pro Ala Leu Phe  
420 425 430

Arg Arg Phe Tyr Lys Trp Leu Lys Pro Gly Gly Lys Val Leu Ile Thr  
435 440 445

Asp Tyr Cys Arg Ser Pro Lys Thr Pro Ser Pro Asp Phe Ala Ile Tyr  
450 455 460

Ile Lys Lys Arg Gly Tyr Asp Leu His Asp Val Gln Ala Tyr Gly Gln  
465 470 475 480

Met Leu Arg Asp Ala Gly Phe Glu Glu Val Ile Ala Glu Asp Arg Thr  
485 490 495

Asp Gln Phe Met Lys Val Leu Lys Arg Glu Leu Asp Ala Val Glu Lys  
500 505 510

Glu Lys Glu Glu Phe Ile Ser Asp Phe Ser Lys Glu Asp Tyr Glu Asp  
515 520 525



Ile Ile Gly Gly Trp Lys Ser Lys Leu Leu Arg Ser Ser Ser Gly Glu  
 530 535 540

Gln Lys Trp Gly Leu Phe Ile Ala Lys Arg Asn  
 545 550 555

<210> 457

<211> 1143

<212> DNA

<213> Arabidopsis thaliana

<400> 457

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actagagaag ctgtgattag gttcaagaga gttgggagtt tgtaagcag tagtgttggt      180
catgctaggt ttagaagagc taagaaactt cagagtcagt tctctcaag tctcttactt      240
gatccatgtc aacaaaggac aacagaagtt ccatcatcat cttctcagaa aacaccggtg      300
ctccggtctg gtttccagga attgagcttg agacaacctt cagattcact cactttaggg      360
actcgtctct ttagttttaa ctcaaatgct aaagctcctc tccttcagct taatcagcag      420
acaatgcctc cttcgaatta tcctactttg ttccagtag aacaacaaca acaacaacaa      480
caacaacaac aacagcagga gcagcagcag cagcagcagc agcaacagca acagtttcat      540
gaacggttac aagctcacca ttttcatcag caacagcagc tacagaaaca tcaagctgag      600
cttatgctta ggaatgcgaa tgggtgggata agtttgagtt tcgataactc tagttgtact      660
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gtaccggcta taagtaacaa ggttgagat atccctcctg atgattattc atggcgaaaa      960
tatggtcaga agcccatcaa gggctctcct tatcccagag gatattacaa atgtagtagc    1020
atgagagggt gtccagcgag gaagcatggt gagagatggt tggaagatcc ggcaatgctt    1080
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<210> 458

&lt;211&gt; 380

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 458

Met Glu Glu Ile Glu Gly Thr Asn Arg Ala Ala Val Glu Ser Cys His  
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Arg Val Leu Asn Leu Leu His Arg Ser Gln Gln Gln Asp His Val Gly  
 20 25 30

Phe Glu Lys Asn Leu Val Ser Glu Thr Arg Glu Ala Val Ile Arg Phe  
 35 40 45

Lys Arg Val Gly Ser Leu Leu Ser Ser Ser Val Gly His Ala Arg Phe  
 50 55 60

Arg Arg Ala Lys Lys Leu Gln Ser His Val Ser Gln Ser Leu Leu Leu  
 65 70 75 80

Asp Pro Cys Gln Gln Arg Thr Thr Glu Val Pro Ser Ser Ser Ser Gln  
 85 90 95

Lys Thr Pro Val Leu Arg Ser Gly Phe Gln Glu Leu Ser Leu Arg Gln  
 100 105 110

Pro Ser Asp Ser Leu Thr Leu Gly Thr Arg Ser Phe Ser Leu Asn Ser  
 115 120 125

Asn Ala Lys Ala Pro Leu Leu Gln Leu Asn Gln Gln Thr Met Pro Pro  
 130 135 140

Ser Asn Tyr Pro Thr Leu Phe Pro Val Gln Gln Gln Gln Gln Gln  
 145 150 155 160

Gln Gln Gln Gln Gln Gln Glu Gln Gln Gln Gln Gln Gln Gln  
 165 170 175

Gln Gln Phe His Glu Arg Leu Gln Ala His His Leu His Gln Gln Gln  
 180 185 190

Gln Leu Gln Lys His Gln Ala Glu Leu Met Leu Arg Lys Cys Asn Gly  
 195 200 205

Gly Ile Ser Leu Ser Phe Asp Asn Ser Ser Cys Thr Pro Thr Met Ser  
 210 215 220

Ser Thr Arg Ser Phe Val Ser Ser Leu Ser Ile Asp Gly Ser Val Ala  
 225 230 235 240

Asn Ile Glu Gly Lys Asn Ser Phe His Phe Gly Val Pro Ser Ser Thr  
 245 250 255

Asp Gln Asn Ser Leu His Ser Lys Arg Lys Cys Pro Leu Lys Gly Asp  
 260 265 270

Glu His Gly Ser Leu Lys Cys Gly Ser Ser Ser Arg Cys His Cys Ala  
 275 280 285

Lys Lys Arg Lys His Arg Val Arg Arg Ser Ile Arg Val Pro Ala Ile  
 290 295 300

Ser Asn Lys Val Ala Asp Ile Pro Pro Asp Asp Tyr Ser Trp Arg Lys  
 305 310 315 320

Tyr Gly Gln Lys Pro Ile Lys Gly Ser Pro Tyr Pro Arg Gly Tyr Tyr  
 325 330 335

Lys Cys Ser Ser Met Arg Gly Cys Pro Ala Arg Lys His Val Glu Arg  
 340 345 350

Cys Leu Glu Asp Pro Ala Met Leu Ile Val Thr Tyr Glu Ala Glu His  
 355 360 365

Asn His Pro Lys Leu Pro Ser Gln Ala Ile Thr Thr  
 370 375 380

<210> 459

<211> 666

<212> DNA

<213> Arabidopsis thaliana

<400> 459  
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 aagtatgaac ctactattgg tgtggagggt catccattag atttcttcac aaactgtggc 180  
 aagatccgtt tttactgctg ggacactgct ggacaagaga aatttggtgg ccttagggat 240

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gttctgtgtg ggaacaaagt tgatgtgaag aacagggaag tgaaggcaaa gcaggttaca 420
ttccacagga agaagaatct gcagtactat gagatatcag caaagagcaa ctacaacttt 480
gagaagcctt tcttgacct tgctagaaaa ctggctggag accaaaacct tcactttgtg 540
gagacaccag cgcttgctcc accagaggtt cacattgaca ttctgatca gcagaagaac 600
gaggccgagc tcttacaggc tgcagctcaa cccctcccg atgacgatga tgatatcttt 660
gagtaa 666

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&lt;210&gt; 460

&lt;211&gt; 221

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 460

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Met Ala Leu Pro Asn Gln Gln Thr Val Asp Tyr Pro Ser Phe Lys Leu
1      5      10      15

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Val Ile Val Gly Asp Gly Gly Thr Gly Lys Thr Thr Phe Val Lys Arg
20      25      30

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His Leu Thr Gly Glu Phe Glu Lys Lys Tyr Glu Pro Thr Ile Gly Val
35      40      45

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Glu Val His Pro Leu Asp Phe Phe Thr Asn Cys Gly Lys Ile Arg Phe
50      55      60

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Tyr Cys Trp Asp Thr Ala Gly Gln Glu Lys Phe Gly Gly Leu Arg Asp
65      70      75      80

```

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Gly Tyr Tyr Ile His Gly Gln Cys Ala Ile Ile Met Phe Asp Val Thr
85      90      95

```

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Ala Arg Leu Thr Tyr Lys Asn Val Pro Thr Trp His Arg Asp Leu Cys
100     105     110

```

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Arg Val Cys Glu Asn Ile Pro Ile Val Leu Cys Gly Asn Lys Val Asp
115     120     125

```

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Val Lys Asn Arg Gln Val Lys Ala Lys Gln Val Thr Phe His Arg Lys
130     135     140

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Lys Asn Leu Gln Tyr Tyr Glu Ile Ser Ala Lys Ser Asn Tyr Asn Phe  
145 150 155 160

Glu Lys Pro Phe Leu Tyr Leu Ala Arg Lys Leu Ala Gly Asp Gln Asn  
165 170 175

Leu His Phe Val Glu Thr Pro Ala Leu Ala Pro Pro Glu Val His Ile  
180 185 190

Asp Ile Ala Asp Gln Gln Lys Asn Glu Ala Glu Leu Leu Gln Ala Ala  
195 200 205

Ala Gln Pro Leu Pro Asp Asp Asp Asp Ile Phe Glu  
210 215 220

<210> 461

<211> 1053

<212> DNA

<213> Arabidopsis thaliana

<400> 461  
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agattacttg acattaaaga aggtgatgat aattgtgaga ttgttttacc tggtggaatc 180  
tccattccta atgtttccaa gtctatcaaa tgcgataaag gggagcgtat gcggtttagg 240  
tccgatattc ttccctttcca acagatggca gacgagttca accaggaact atctttggct 300  
gggaaaatcc cgtcagggtc ttcaatgcc atgtttgaat tctcgagctg ttggcagaaa 360  
gacgcagcct acacaaaaaa ccttgctttt gatgggggtt tcatctcatt atactcggtg 420  
gctttggaca aatctcaagt gtactccgt gagcatgtta agcaggctgt tccatcaaca 480  
tgggaccctg ctgcattggc aaggtttata gatatttatg ggacgcatat aattgttagt 540  
gttaagatgg gaggaagaaga tgtgatttat gcaaaacaac aacactcctc aaaacttcag 600  
cctgaggatc tgcagaaaaa gttaaaagag gtggcagata agaggttcgt ggaagctagc 660  
gtagtgcata atacgggttc agaaagagta caagcaagta gtaagggtga aacaaaggag 720  
caacgcctga gatttgcaga taccagttct ttgggctctt atgcaaataa ggaggactat 780  
gtcttcatgt gcaagaggcg aggtggaaac gataacagaa atctaagca taatgaatgg 840  
ctgcaaacag ttcagatgga gcctgatgtt atctccatgt cttttattcc aattacgtct 900

ttgcttaatg gagttccagg aagtggttc ttaagccatg ccataaatct gtatctaaga 960  
 tgtaagccta taaatcattt gcgctttgtg ctttctttc tggagtatt cttcatacta 1020  
 gtggtttctt ttacctttag attagaagtt tga 1053

<210> 462

<211> 350

<212> PRT

<213> Arabidopsis thaliana

<400> 462

Met Ala Leu Arg Leu Pro Ala Ser Lys Ala Ala Glu Val Ala Ile Gly  
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Ser Ile Gly Cys Gly Tyr Asp Leu Ala Ile Asp Leu Arg Leu Lys Tyr  
 20 25 30

Cys Lys Gly Gly Ser Lys Asp Ser Arg Leu Leu Asp Ile Lys Glu Gly  
 35 40 45

Asp Asp Asn Cys Glu Ile Val Leu Pro Gly Gly Ile Ser Ile Pro Asn  
 50 55 60

Val Ser Lys Ser Ile Lys Cys Asp Lys Gly Glu Arg Met Arg Phe Arg  
 65 70 75 80

Ser Asp Ile Leu Pro Phe Gln Gln Met Ala Glu Gln Phe Asn Gln Glu  
 85 90 95

Leu Ser Leu Ala Gly Lys Ile Pro Ser Gly Leu Phe Asn Ala Met Phe  
 100 105 110

Glu Phe Ser Ser Cys Trp Gln Lys Asp Ala Ala Tyr Thr Lys Asn Leu  
 115 120 125

Ala Phe Asp Gly Val Phe Ile Ser Leu Tyr Ser Val Ala Leu Asp Lys  
 130 135 140

Ser Gln Val Leu Leu Arg Glu His Val Lys Gln Ala Val Pro Ser Thr  
 145 150 155 160

Trp Asp Pro Ala Ala Leu Ala Arg Phe Ile Asp Ile Tyr Gly Thr His  
 165 170 175

Ile Ile Val Ser Val Lys Met Gly Gly Lys Asp Val Ile Tyr Ala Lys  
 180 185 190

Gln Gln His Ser Ser Lys Leu Gln Pro Glu Asp Leu Gln Lys Arg Leu  
 195 200 205

Lys Glu Val Ala Asp Lys Arg Phe Val Glu Ala Ser Val Val His Asn  
 210 215 220

Thr Gly Ser Glu Arg Val Gln Ala Ser Ser Lys Val Glu Thr Lys Glu  
 225 230 235 240

Gln Arg Leu Arg Phe Ala Asp Thr Ser Ser Leu Gly Ser Tyr Ala Asn  
 245 250 255

Lys Glu Asp Tyr Val Phe Met Cys Lys Arg Arg Gly Gly Asn Asp Asn  
 260 265 270

Arg Asn Leu Met His Asn Glu Trp Leu Gln Thr Val Gln Met Glu Pro  
 275 280 285

Asp Val Ile Ser Met Ser Phe Ile Pro Ile Thr Ser Leu Leu Asn Gly  
 290 295 300

Val Pro Gly Ser Gly Phe Leu Ser His Ala Ile Asn Leu Tyr Leu Arg  
 305 310 315 320

Cys Lys Pro Ile Asn His Leu Arg Phe Val His Phe Phe Leu Glu Leu  
 325 330 335

Phe Phe Ile Leu Val Val Ser Phe Thr Phe Arg Leu Glu Val  
 340 345 350

<210> 463

<211> 489

<212> DNA

<213> Arabidopsis thaliana

<400> 463  
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 atgagaccat tagccaaact caaaagttag ggccaacgtc tcaagcaagc ttgcagacgc 180  
 aggtctacga gaagatccgc atacataccc gttgatcata agaaagccga cccggttcca 240

aggggacact tagctatcta cgtgggtcaa aaagacggcg actgtcatag agttttggtgta 300  
 cccatcggtt actttaacca tcctttgttc ggtgagctgc ttcgagaagc cgaanaagag 360  
 tacggatttt gccacgaagg aggtatcact attccttgtc tgtattcaga ttctgaacgg 420  
 gtcaagaccc ggatcgcatc ggggtcaagt tctcgggtat ttccatgggg ccgtcattgc 480  
 cgcaattga 489

<210> 464

<211> 162

<212> PRT

<213> *Arabidopsis thaliana*

<400> 464

Met Arg Lys Ile Ile Gly Phe Arg Ile Gly Arg Arg Val Ser Arg Trp  
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Ile Phe Arg Lys Thr Arg Ile Gln Arg Ser Gly Tyr Asn Arg Ile His  
20 25 30

Ser Thr Gln Gln Ala Cys Met Leu Met Arg Pro Leu Ala Lys Leu Lys  
35 40 45

Ser Trp Gly Gln Arg Leu Lys Gln Ser Phe Arg Arg Arg Ser Thr Arg  
50 55 60

Arg Ser Ala Tyr Ile Pro Val Asp His Lys Lys Ala Asp Pro Val Pro  
65 70 75 80

Arg Gly His Leu Ala Ile Tyr Val Gly Gln Lys Asp Gly Asp Cys His  
85 90 95

Arg Val Leu Val Pro Ile Val Tyr Phe Asn His Pro Leu Phe Gly Glu  
100 105 110

Leu Leu Arg Glu Ala Glu Lys Glu Tyr Gly Phe Cys His Glu Gly Gly  
115 120 125

Ile Thr Ile Pro Cys Leu Tyr Ser Asp Phe Glu Arg Val Lys Thr Arg  
130 135 140

Ile Ala Ser Gly Ser Ser Ser Arg Val Phe Pro Trp Gly Arg His Cys  
145 150 155 160



Arg Asn

&lt;210&gt; 465

&lt;211&gt; 1473

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 465

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ccagctgtct ccgcttcact gagcgctgcc gctgattcag ccgccactga gtctcttgga      180
cggattggat cactgagtc agtatctggt gtactcgggt gccaatgggg agatgaagggt      240
aaaggcaaac tcgttgacat cttagcccaa cactttgaca tcggtgctcg ttgtcagggt      300
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gtgccttcag gtatcttgaa ttaggatact acttgtgtca ttggaaacgg agttgtggtg      420
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gggctcaggg aatctgagct tgccaagtcg ttcattggca ccaccaagag ggaattgggt      600
cctgcctact ctagtaaaat gataaggaaat ggtattagag taggtgatct caggcacatg      660
gatactttac ctcaaaagct tgacctttta ctatcagatg cagcggcaag gtttcaaggg      720
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agattggagc cctacattac tgacactgtc catttcacat atgactcgat ttgcgagaag      840
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ccttttggtt cttcctccag cccctcagcc ggtggggtct gcacagggtc tggatttgca      960
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ggtccatttc cgacagaaaa tttgggcaca ggtggtgacc ttcttaggtt agctggacag     1080
gagtttgga ctaacaactg tcgtcctcgt cgggtgtggt ggcttgacat tgttgccctg     1140
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cctgggtgga agcttgacat atcctcggtc agaaactact ctgatcttcc aaaggctgct     1380
cagcaatatg ttgagaggat tgaagaactc gtgggtgtgc ccattcatta cattggtatt     1440

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gggccccgtc gtgatgccct tatatataaa tga

1473

&lt;210&gt; 466

&lt;211&gt; 490

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 466

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20 25 30Phe Val Ser Cys Ser Ala Lys Arg Pro Ala Val Ser Ala Ser Leu Ser  
35 40 45Val Ala Ala Asp Ser Ala Ala Thr Glu Ser Leu Gly Arg Ile Gly Ser  
50 55 60Leu Ser Gln Val Ser Gly Val Leu Gly Cys Gln Trp Gly Asp Glu Gly  
65 70 75 80Lys Gly Lys Leu Val Asp Ile Leu Ala Gln His Phe Asp Ile Val Ala  
85 90 95Arg Cys Gln Gly Gly Ala Asn Ala Gly His Thr Ile Tyr Asn Ser Glu  
100 105 110Gly Lys Lys Phe Ala Leu His Leu Val Pro Ser Gly Ile Leu Asn Glu  
115 120 125Asp Thr Thr Cys Val Ile Gly Asn Gly Val Val Val His Leu Pro Gly  
130 135 140Leu Phe Lys Glu Ile Asp Gly Leu Glu Ser Asn Gly Val Ser Cys Lys  
145 150 155 160Gly Arg Ile Leu Val Ser Asp Arg Ala His Leu Leu Phe Asp Phe His  
165 170 175Gln Glu Val Asp Gly Leu Arg Glu Ser Glu Leu Ala Lys Ser Phe Ile  
180 185 190

Gly Thr Thr Lys Arg Gly Ile Gly Pro Ala Tyr Ser Ser Lys Val Ile  
 195 200 205  
 Arg Asn Gly Ile Arg Val Gly Asp Leu Arg His Met Asp Thr Leu Pro  
 210 215 220  
 Gln Lys Leu Asp Leu Leu Leu Ser Asp Ala Ala Ala Arg Phe Gln Gly  
 225 230 235  
 Phe Lys Tyr Thr Pro Glu Met Leu Arg Glu Glu Val Glu Ala Tyr Lys  
 245 250 255  
 Arg Tyr Ala Asp Arg Leu Glu Pro Tyr Ile Thr Asp Thr Val His Phe  
 260 265 270  
 Ile Asn Asp Ser Ile Ser Gln Lys Lys Lys Val Leu Val Glu Gly Gly  
 275 280 285  
 Gln Ala Thr Met Leu Asp Ile Asp Phe Gly Thr Tyr Pro Phe Val Thr  
 290 295 300  
 Ser Ser Ser Pro Ser Ala Gly Gly Ile Cys Thr Gly Leu Gly Ile Ala  
 305 310 315 320  
 Pro Ser Val Val Gly Asp Leu Ile Gly Val Val Lys Ala Tyr Thr Thr  
 325 330 335  
 Arg Val Gly Ser Gly Pro Phe Pro Thr Glu Asn Leu Gly Thr Gly Gly  
 340 345 350  
 Asp Leu Leu Arg Leu Ala Gly Gln Glu Phe Gly Thr Thr Thr Gly Arg  
 355 360 365  
 Pro Arg Arg Cys Gly Trp Leu Asp Ile Val Ala Leu Lys Phe Ser Cys  
 370 375 380  
 Gln Ile Asn Gly Phe Ala Ser Leu Asn Leu Thr Lys Leu Asp Val Leu  
 385 390 395 400  
 Ser Asp Leu Asn Glu Ile Gln Leu Gly Val Ala Tyr Lys Arg Ser Asp  
 405 410 415  
 Gly Thr Pro Val Lys Ser Phe Pro Gly Asp Leu Arg Leu Leu Glu Glu  
 420 425 430  
 Leu His Val Glu Tyr Glu Val Leu Pro Gly Trp Lys Ser Asp Ile Ser  
 435 440 445

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Ser Val Arg Asn Tyr Ser Asp Leu Pro Lys Ala Ala Gln Gln Tyr Val  
450 455 460

Glu Arg Ile Glu Glu Leu Val Gly Val Pro Ile His Tyr Ile Gly Ile  
465 470 475 480

Gly Pro Gly Arg Asp Ala Leu Ile Tyr Lys  
485 490

<210> 467

<211> 993

<212> DNA

<213> Arabidopsis thaliana

<400> 467  
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acatccagcg aagatgattc acttcgcctc ttcgatatcg ccaacgctaa acagctgaag 180  
attacatacc ataagaaaca tggcaccgat cgtgtatgct ttacccatca tcttagctct 240  
ctaatttgct cttctcgata caatttgag tccactgggtg aatccttgag atatctctca 300  
atgtatgata atcggatcct acgctacttt aaagggcata aagacagggt tgtatcactt 360  
tgtatgtctc ctataaatga tagcttcattg tctggttctc tcgaccgaag tgttagactc 420  
tgggatcttc gtgtaaatgc ctgccaggga attctacatc tacgtggtag acctgcagtt 480  
gcgtatgacc aacaaggcct tgtgtttgca attgcaatgg aaggagggtgc tgttaaatta 540  
tttgattcca ggtgttatga caagggtccc ttgacacat ttctggtggg tggggataact 600  
gctgaggtta acgatataaa attcagcaac gatggggaat ccatgctcct aacgactaca 660  
aataacaata tctacgttct tgatgcatat cgtggagaga agaaatgtgg ttttagtttg 720  
gagccttcac agggatcacac catagaggcc accttcacac cagatggcaa gtatgttctg 780  
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agggtgggaga acaacatagg agtagtgtcg tgtctgaaat gggcaccacg tagagccatg 900  
ttcgttgctg cttctacggt tctcacattc tggatcccaa acgacgggtga atcaccagcc 960  
cccgcgatc ctctaccga tcaacaacag tga 993

<210> 468

<211> 330

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 468

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Met Ser Leu Thr Glu Leu Asp Asp Gly Leu Val Arg Arg Met Ala Met
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Gly Ala Val Phe Ser Asp Phe Gly Gly Lys Ile His Ser Val Gly Phe
 20      25      30
His Arg Thr Asp Asp Leu Leu Val Thr Ser Ser Glu Asp Asp Ser Leu
 35      40      45
Arg Leu Phe Asp Ile Ala Asn Ala Lys Gln Leu Lys Ile Thr Tyr His
 50      55      60
Lys Lys His Gly Thr Asp Arg Val Cys Phe Thr His His Pro Ser Ser
 65      70      75      80
Leu Ile Cys Ser Ser Arg Tyr Asn Leu Glu Ser Thr Gly Glu Ser Leu
 85      90      95
Arg Tyr Leu Ser Met Tyr Asp Asn Arg Ile Leu Arg Tyr Phe Lys Gly
100      105      110
His Lys Asp Arg Val Val Ser Leu Cys Met Ser Pro Ile Asn Asp Ser
115      120
Phe Met Ser Gly Ser Leu Asp Arg Ser Val Arg Leu Trp Asp Leu Arg
130      135      140
Val Asn Ala Cys Gln Gly Ile Leu His Leu Arg Gly Arg Pro Ala Val
145      150      155      160
Ala Tyr Asp Gln Gln Gly Leu Val Phe Ala Ile Ala Met Glu Gly Gly
165      170      175
Ala Val Lys Leu Phe Asp Ser Arg Cys Tyr Asp Lys Gly Pro Phe Asp
180      185      190
Thr Phe Leu Val Gly Gly Asp Thr Ala Glu Val Asn Asp Ile Lys Phe
195      200      205
Ser Asn Asp Gly Lys Ser Met Leu Leu Thr Thr Thr Asn Asn Asn Ile
210      215      220

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047-E2F-PCT.ST25.txt

Tyr Val Leu Asp Ala Tyr Arg Gly Glu Lys Lys Cys Gly Phe Ser Leu  
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Glu Pro Ser Gln Gly Thr Pro Ile Glu Ala Thr Phe Thr Pro Asp Gly  
245 250 255

Lys Tyr Val Leu Ser Gly Ser Gly Asp Gly Thr Leu His Ala Trp Asn  
260 265 270

Ile Glu Asn Pro Ser Glu Val Ala Arg Trp Glu Asn Asn Ile Gly Val  
275 280 285

Val Ser Cys Leu Lys Trp Ala Pro Arg Arg Ala Met Phe Val Ala Ala  
290 295 300

Ser Thr Val Leu Thr Phe Trp Ile Pro Asn Asp Gly Glu Ser Pro Ala  
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Pro Ala Asp Pro Pro Thr Asp Gln Gln Gln  
325 330

<210> 469

<211> 1365

<212> DNA

<213> Arabidopsis thaliana

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gagtataatg aagatgatac tccgaaaaga gaaacgatca agccaatggt agatggggga 540  
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tgcaactatt atcttttccc acctcaagtg aagtttccgt tgtgactct tgcagaaacc 660  
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047-E2F-PCT.ST25.txt

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<210> 470

<211> 454

<212> PRT

<213> Arabidopsis thaliana

<400> 470

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 20 25 30

Phe Val Pro Gly Pro Gly Leu Arg Asp Asp Ile Arg Asp Tyr Val Arg  
 35 40 45

Ile Leu Val Ile Gly Ala Gly Gly Leu Gly Cys Glu Leu Leu Lys Asp  
 50 55 60

Leu Ala Leu Ser Gly Phe Arg Asn Leu Glu Val Ile Asp Met Asp Arg  
 65 70 75 80

Ile Glu Val Thr Asn Leu Asn Arg Gln Phe Leu Phe Arg Ile Glu Asp  
 85 90 95

Val Gly Lys Pro Lys Ala Glu Val Ala Ala Lys Arg Val Met Glu Arg  
 100 105 110

047-E2F-PCT.ST25.txt

Val Ser Gly Val Glu Ile Val Pro His Phe Ser Arg Ile Glu Asp Lys  
115 120 125

Glu Ile Glu Phe Tyr Asn Asp Phe Asn Ile Ile Ala Leu Gly Leu Asp  
130 135 140

Ser Ile Glu Ala Arg Lys Tyr Ile Asn Gly Val Ala Cys Gly Phe Leu  
145 150 155 160

Glu Tyr Asn Glu Asp Asp Thr Pro Lys Arg Glu Thr Ile Lys Pro Met  
165 170 175

Val Asp Gly Gly Thr Glu Gly Phe Lys Gly His Ala Arg Val Ile Leu  
180 185 190

Pro Gly Val Thr Pro Cys Phe Glu Cys Thr Ile Tyr Leu Phe Pro Pro  
195 200 205

Gln Val Lys Phe Pro Leu Cys Thr Leu Ala Glu Thr Pro Arg Asn Ala  
210 215 220

Ala His Cys Ile Glu Tyr Ala His Leu Ile Gln Trp Glu Thr Val His  
225 230 235 240

Arg Gly Lys Thr Phe Asp Pro Asp Glu Pro Glu His Met Lys Trp Val  
245 250 255

Tyr Asp Glu Ala Ile Arg Arg Ala Glu Leu Phe Gly Ile Pro Gly Val  
260 265 270

Thr Tyr Ser Leu Thr Gln Gly Val Val Lys Asn Ile Ile Pro Ala Ile  
275 280 285

Ala Ser Thr Asn Ala Ile Ile Ser Ala Ala Cys Ala Leu Glu Thr Leu  
290 295 300

Lys Ile Val Ser Ala Cys Ser Lys Thr Leu Val Asn Tyr Leu Thr Tyr  
305 310 315 320

Asn Gly Gly Glu Gly Leu Tyr Thr Glu Val Thr Lys Phe Glu Arg Asp  
325 330 335

Thr Glu Cys Leu Val Cys Gly Pro Gly Ile Leu Ile Glu Leu Asp Thr  
340 345 350

Ser Val Thr Leu Ser Lys Phe Ile Glu Met Leu Glu Asp His Pro Lys  
355 360 365



Leu Leu Leu Ser Lys Ala Ser Val Lys Gln Gly Glu Asn Thr Leu Tyr  
 370 375 380

Met Gln Ala Pro Pro Val Leu Glu Glu Phe His Arg Pro Lys Leu Ser  
 385 390 395 400

Lys Pro Leu Tyr Asp Leu Met Gly Arg Val Gln Lys Asp Thr Ile His  
 405 410 415

Val Phe Gly Gln Arg Ala Leu Lys Asn Asn Glu Lys Glu Ser Cys Thr  
 420 425 430

Thr Lys Val Arg Val Val Phe Lys Gly Ala Asp Gly Val Ala Asp Met  
 435 440 445

Asp Thr Ala Ile Gly Ala  
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<211> 1596

<212> DNA

<213> Arabidopsis thaliana

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 ctacagaatt ctaagttcga ggaacagaga attaaccgcg aacgagatgt catcctcagg 660  
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<210> 472

<211> 531

<212> PRT

<213> Arabidopsis thaliana

<400> 472

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20 25 30

Asp Ser Val Pro Ala Ser Ala Ser Pro Thr Ala Leu Ser Pro Pro Pro  
35 40 45

Pro His Leu Met Pro Tyr Asp His Ala Ala Glu Ile Ile Lys Asn Lys  
50 55 60

Ile Lys Lys Leu Glu Asn Pro Asp Lys Arg Phe Leu Lys Tyr Ala Ser  
65 70 75 80

Pro His Pro Ile Leu Ala Ser His Asn His Ile Leu Ser Ala Pro Glu  
85 90 95

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Thr Arg Val Thr Thr Leu Pro Asn Gly Leu Arg Val Ala Thr Glu Ser  
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 115 120 125  
 Ser Arg Phe Glu Ser Asp Glu Thr Asn Gly Thr Ala His Phe Leu Glu  
 130 135 140  
 His Met Ile Phe Lys Gly Thr Asp Arg Arg Thr Val Arg Ala Leu Glu  
 145 150 155 160  
 Glu Glu Ile Glu Asp Ile Gly Gly His Leu Asn Ala Tyr Thr Ser Arg  
 165 170 175  
 Glu Gln Thr Thr Tyr Tyr Ala Lys Val Leu Asp Ser Asn Val Asn Gln  
 180 185 190  
 Ala Leu Asp Val Leu Ala Asp Ile Leu Gln Asn Ser Lys Phe Glu Glu  
 195 200 205  
 Gln Arg Ile Asn Arg Glu Arg Asp Val Ile Leu Arg Glu Met Gln Glu  
 210 215 220  
 Val Glu Gly Gln Thr Asp Glu Val Val Leu Asp His Leu His Ala Thr  
 225 230 235 240  
 Ala Phe Gln Tyr Thr Pro Leu Gly Arg Thr Ile Leu Gly Pro Ala Gln  
 245 250 255  
 Asn Val Lys Ser Ile Thr Arg Glu Asp Leu Gln Asn Tyr Ile Lys Thr  
 260 265 270  
 His Tyr Thr Ala Ser Arg Met Val Ile Ala Ala Ala Gly Ala Val Lys  
 275 280 285  
 His Glu Glu Val Val Glu Gln Val Lys Lys Leu Phe Thr Lys Leu Ser  
 290 295 300  
 Ser Asp Pro Thr Thr Thr Ser Gln Leu Val Ala Asn Glu Pro Ala Ser  
 305 310 315 320  
 Phe Thr Gly Ser Glu Val Arg Met Ile Asp Asp Asp Leu Pro Leu Ala  
 325 330 335  
 Gln Phe Ala Val Ala Phe Glu Gly Ala Ser Trp Thr Asp Pro Asp Ser  
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340

345

350

Val Ala Leu Met Val Met Gln Thr Met Leu Gly Ser Trp Asn Lys Asn  
355 360

Val Gly Gly Gly Lys His Val Gly Ser Asp Leu Thr Gln Arg Val Ala  
370 375

Ile Asn Glu Ile Ala Glu Ser Ile Met Ala Phe Asn Thr Asn Tyr Lys  
385 390 395 400

Asp Thr Gly Leu Phe Gly Val Tyr Ala Val Ala Lys Ala Asp Cys Leu  
405 410 415

Asp Asp Leu Ser Tyr Ala Ile Met Tyr Glu Val Thr Lys Leu Ala Tyr  
420 425 430

Arg Val Ser Asp Ala Asp Val Thr Arg Ala Arg Asn Gln Leu Lys Ser  
435 440 445

Ser Leu Leu Leu His Met Asp Gly Thr Ser Pro Ile Ala Glu Asp Ile  
450 455 460

Gly Arg Gln Leu Leu Thr Tyr Gly Arg Arg Ile Pro Thr Ala Glu Leu  
465 470 475 480

Phe Ala Arg Ile Asp Ala Val Asp Ala Ser Thr Val Lys Arg Val Ala  
485 490 495

Asn Lys Tyr Ile Tyr Asp Lys Asp Ile Ala Ile Ser Ala Ile Gly Pro  
500 505 510

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515 520 525

Asn Arg Tyr  
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<211> 1275

<212> DNA

<213> Arabidopsis thaliana

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047-E2F-PCT.ST25.txt

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ttccctctct cttctgattc acaagatatt gagataagat cagacacaag tttggctgaa 240
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cctgaagatg ccagttggat tgatcgctac atcgggtattg tggaaattcc aggcattggt 360
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<210> 474

<211> 424

<212> PRT

<213> Arabidopsis thaliana

<400> 474

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047-E2F-PCT.ST25.txt

Glu Asp Leu Trp Asp Glu Gln Lys Pro Gln Leu Ser Pro Asn Glu Lys  
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 Leu Asn Ala Cys Phe Glu Ser Ile Pro Val Ser Ala Phe Pro Leu Ser  
 50 55 60  
 Ser Asp Ser Gln Asp Ile Glu Ile Arg Ser Asp Thr Ser Leu Ala Glu  
 65 70 75 80  
 Ala Val Gln Thr Leu Ser Lys Phe Lys Val Leu Ser Ala Pro Val Val  
 85 90 95  
 Asp Val Asp Ala Pro Glu Asp Ala Ser Trp Ile Asp Arg Tyr Ile Gly  
 100 105 110  
 Ile Val Glu Phe Pro Gly Ile Val Val Trp Leu Leu His Gln Leu Glu  
 115 120 125  
 Pro Pro Ser Pro Arg Ser Pro Ala Val Ala Ala Ser Asn Gly Phe Ser  
 130 135 140  
 His Asp Phe Thr Thr Asp Val Leu Asp Asn Gly Asp Ser Ala Val Thr  
 145 150 155 160  
 Ser Gly Asn Phe Phe Glu Val Leu Thr Ser Ser Glu Leu Tyr Lys Asn  
 165 170 175  
 Thr Lys Val Arg Asp Ile Ser Gly Thr Phe Arg Trp Ala Pro Phe Leu  
 180 185 190  
 Ala Leu Gln Lys Glu Asn Ser Phe Leu Thr Met Leu Leu Leu Ser  
 195 200 205  
 Lys Tyr Lys Met Lys Ser Ile Pro Val Val Asp Leu Gly Val Ala Lys  
 210 215 220  
 Ile Glu Asn Ile Ile Thr Gln Ser Gly Val Ile His Met Leu Ala Glu  
 225 230 235 240  
 Cys Ala Gly Leu Leu Trp Phe Glu Asp Trp Gly Ile Lys Thr Leu Ser  
 245 250 255  
 Glu Val Gly Leu Pro Ile Met Ser Lys Asp His Ile Ile Lys Ile Tyr  
 260 265 270  
 Glu Asp Glu Pro Val Leu Gln Ala Phe Lys Leu Met Arg Arg Lys Arg  
 275 280 285

047-E2F-PCT.ST25.txt

Ile Gly Gly Ile Pro Val Ile Glu Arg Asn Ser Glu Lys Pro Val Gly  
290 295 300

Asn Ile Ser Leu Arg Asp Val Gln Phe Leu Leu Thr Ala Pro Glu Ile  
305 310 315 320

Tyr His Asp Tyr Arg Ser Ile Thr Thr Lys Asn Phe Leu Val Ser Val  
325 330 335

Arg Glu His Leu Glu Lys Cys Gly Asp Thr Ser Ala Pro Ile Met Ser  
340 345 350

Gly Val Ile Ala Cys Thr Lys Asn His Thr Leu Lys Glu Leu Ile Leu  
355 360 365

Met Leu Asp Ala Glu Lys Ile His Arg Ile Tyr Val Val Asp Asp Phe  
370 375 380

Gly Asn Leu Glu Gly Leu Ile Thr Leu Arg Asp Ile Ile Ala Arg Leu  
385 390 395 400

Val His Glu Pro Ser Gly Tyr Phe Gly Asp Phe Phe Asp Gly Val Met  
405 410 415

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<210> 475

<211> 1086

<212> DNA

<213> Arabidopsis thaliana

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<211> 361

<212> PRT

<213> *Arabidopsis thaliana*

<400> 476

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20 25 30

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35 40 45

Asp Asn Tyr Lys Gln Tyr Trp Ser Phe Phe Arg Arg Pro Lys Glu Ile  
50 55 60

Glu Thr Ala Glu Lys Val Pro Asp Phe Val Asp Thr Phe Tyr Asn Leu  
65 70 75 80

Val Thr Asp Ile Tyr Glu Trp Gly Trp Gly Gln Ser Phe His Phe Ser  
85 90 95

Pro Ser Ile Pro Gly Lys Ser His Lys Asp Ala Thr Arg Leu His Glu  
100 105 110



Glu Met Ala Val Asp Leu Ile Gln Val Lys Pro Gly Gln Lys Ile Leu  
 115 120 125  
 Asp Val Gly Cys Gly Val Gly Gly Pro Met Arg Ala Ile Ala Ser His  
 130 135 140  
 Ser Arg Ala Asn Val Val Gly Ile Thr Ile Asn Glu Tyr Gln Val Asn  
 145 150 155 160  
 Arg Ala Arg Leu His Asn Lys Lys Ala Gly Leu Asp Ala Leu Cys Glu  
 165 170 175  
 Val Val Cys Gly Asn Phe Leu Gln Met Pro Phe Asp Asp Asn Ser Phe  
 180 185 190  
 Asp Gly Ala Tyr Ser Ile Glu Ala Thr Cys His Ala Pro Lys Leu Glu  
 195 200 205  
 Glu Val Tyr Ala Glu Ile Tyr Arg Val Leu Lys Pro Gly Ser Met Tyr  
 210 215 220  
 Val Ser Tyr Glu Trp Val Thr Thr Glu Lys Phe Lys Ala Glu Asp Asp  
 225 230 235 240  
 Glu His Val Glu Val Ile Gln Gly Ile Glu Arg Gly Asp Ala Leu Pro  
 245 250 255  
 Gly Leu Arg Ala Tyr Val Asp Ile Ala Glu Thr Ala Lys Lys Val Gly  
 260 265 270  
 Phe Glu Ile Val Lys Glu Lys Asp Leu Ala Ser Pro Pro Ala Glu Pro  
 275 280 285  
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 290 295 300  
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 305 310 315 320  
 Val Asp Val His Glu Met Leu Phe Lys Thr Ala Asp Tyr Leu Thr Arg  
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355

360

&lt;210&gt; 477

&lt;211&gt; 933

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 477

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&lt;210&gt; 478

&lt;211&gt; 310

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 478

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 50 55 60  
 Gly Gly Leu Gly Gly Ser Gly Pro Thr Gly Phe His Asn Gln Met Phe  
 65 70 75 80  
 Pro Leu Gly Leu Ser Leu Asp Gln Gly Lys Gly Pro Gly Phe Leu Arg  
 85 90 95  
 Pro Glu Gly Gly His Gly Ser Gly Lys Arg Phe Ser Asp Asp Val Val  
 100 105 110  
 Asp Asn Arg Cys Ser Ser Met Lys Pro Val Phe His Gly Gln Pro Met  
 115 120 125  
 Gln Gln Pro Pro Pro Ser Ala Pro His Gln Pro Thr Ser Ile Arg Pro  
 130 135 140  
 Arg Val Arg Ala Arg Arg Gly Gln Ala Thr Asp Pro His Ser Ile Ala  
 145 150 155 160  
 Glu Arg Leu Arg Arg Glu Arg Ile Ala Glu Arg Ile Arg Ala Leu Gln  
 165 170 175  
 Glu Leu Val Pro Thr Val Asn Lys Thr Asp Arg Ala Ala Met Ile Asp  
 180 185 190  
 Glu Ile Val Asp Tyr Val Lys Phe Leu Arg Leu Gln Val Lys Val Leu  
 195 200 205  
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 210 215 220  
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 225 230 235 240  
 Arg Thr Pro Gln Pro Ala Trp Glu Lys Trp Ser Asn Asp Gly Thr Glu  
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047-E2F-PCT.ST25.txt

Leu Leu Gln Ser Lys Ala Leu Cys Met Met Pro Ile Ser Leu Ala Met  
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&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 480

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Gln Ser Ser Arg Ile Asn Asn Thr Leu Pro Leu Pro Ser Val Leu Lys
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Gly Ala Phe Lys Ile Val Glu Gly Pro Ala Ser Ser Ala Ala Gly Asn
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Pro Asp Glu Ile Ala Lys Leu Phe Pro Gly Leu Tyr Gly Gln Pro Ser
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Val Ala Val Val Pro Asp Gln Asp Ala Pro Ser Ser Ala Pro Lys Leu
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Lys Ile Gly Val Val Leu Ser Gly Gly Gln Ala Pro Gly Gly His Asn
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Val Ile Ser Gly Leu Phe Asp Tyr Leu Gln Glu Arg Ala Lys Gly Ser
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## 047-E2F-PCT.ST25.txt

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 165 170 175  
 Gln Phe Lys Gln Ala Glu Glu Thr Ala Lys Lys Leu Asp Leu Asp Gly  
 180 185 190  
 Leu Val Val Ile Gly Gly Asp Asp Ser Asn Thr Asn Ala Cys Leu Leu  
 195 200 205  
 Ala Glu Asn Phe Arg Ser Lys Asn Leu Lys Thr Arg Val Ile Gly Cys  
 210 215 220  
 Pro Lys Thr Ile Asp Gly Asp Leu Lys Cys Lys Glu Val Pro Thr Ser  
 225 230 235 240  
 Phe Gly Phe Asp Thr Ala Cys Lys Ile Tyr Ser Glu Met Ile Gly Asn  
 245 250 255  
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 260 265 270  
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 325 330 335  
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405 410 415

Glu Leu Glu Lys Arg Lys Gln Ala Gly Ala Tyr Lys Gly Gln Phe Met  
420 425 430

Gly Gln Ser His Phe Phe Gly Tyr Glu Gly Arg Cys Gly Leu Pro Thr  
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Leu Leu Asn Ser Gly Lys Thr Gly Leu Ile Ser Ser Val Gly Asn Leu  
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485 490 495

Leu Met Asp Val Glu Arg Arg His Gly Lys Phe Lys Pro Val Ile Lys  
500 505 510

Lys Ala Met Val Glu Leu Glu Gly Ala Pro Phe Lys Lys Phe Ala Ser  
515 520 525

Leu Arg Glu Glu Trp Ala Leu Lys Asn Arg Tyr Ile Ser Pro Gly Pro  
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<213> Arabidopsis thaliana

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Lys Pro Asp Gly Trp Ile Asn Ser Ser Ser Thr Asp Cys Cys Asn  
 Page 747

50

55

60

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 165 170 175  
 Val Lys Leu Ala Val Asn Tyr Phe Ala Gly Asn Phe Thr Ser Gly Phe  
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 Gly Lys Cys Val Leu Leu Glu His Leu Cys Leu Gly Met Asn Asp Leu  
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 245 250 255  
 Ser Gly Glu Ile Pro Asp Val Phe Asp Glu Leu Pro Gln Leu Lys Phe  
 260 265 270  
 Phe Leu Gly Gln Thr Asn Gly Phe Ile Gly Gly Ile Pro Lys Ser Leu  
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 Ala Asn Ser Pro Ser Leu Asn Leu Leu Asn Leu Arg Asn Asn Ser Leu  
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Leu Asp Leu Gly Thr Asn Arg Phe Asn Gly Arg Leu Pro Glu Asn Leu  
325 330 335

Pro Asp Cys Lys Arg Leu Lys Asn Val Asn Leu Ala Arg Asn Thr Phe  
340 345 350

His Gly Gln Val Pro Glu Ser Phe Lys Asn Phe Glu Ser Leu Ser Tyr  
355 360 365

Phe Ser Leu Ser Asn Ser Ser Leu Ala Asn Ile Ser Ser Ala Leu Gly  
370 375 380

Ile Leu Gln His Cys Lys Asn Leu Thr Thr Leu Val Leu Thr Leu Asn  
385 390 395 400

Phe His Gly Glu Ala Leu Pro Asp Asp Ser Ser Leu His Phe Glu Lys  
405 410 415

Leu Lys Val Leu Val Val Ala Asn Cys Arg Leu Thr Gly Ser Met Pro  
420 425 430

Arg Trp Leu Ser Ser Ser Asn Glu Leu Gln Leu Leu Asp Leu Ser Trp  
435 440 445

Asn Arg Leu Thr Gly Ala Ile Pro Ser Trp Ile Gly Asp Phe Lys Ala  
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Leu Phe Tyr Leu Asp Leu Ser Asn Asn Ser Phe Thr Gly Glu Ile Pro  
465 470 475 480

Lys Ser Leu Thr Lys Leu Glu Ser Leu Thr Ser Arg Asn Ile Ser Val  
485 490 495

Asn Glu Pro Ser Pro Asp Phe Pro Phe Met Lys Arg Asn Glu Ser  
500 505 510

Ala Arg Ala Leu Gln Tyr Asn Gln Ile Phe Gly Phe Pro Pro Thr Ile  
515 520 525

Glu Leu Gly His Asn Asn Leu Ser Gly Pro Ile Trp Glu Glu Phe Gly  
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Asn Leu Lys Lys Leu His Val Phe Asp Leu Lys Trp Asn Ala Leu Ser  
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047-E2F-PCT.ST25.txt

Gly Ser Ile Pro Ser Ser Leu Ser Gly Met Thr Ser Leu Glu Ala Leu  
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Asp Leu Ser Asn Asn Arg Leu Ser Gly Ser Ile Pro Val Ser Leu Gln  
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Gln Leu Ser Phe Leu Ser Lys Phe Ser Val Ala Tyr Asn Asn Leu Ser  
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Gly Val Ile Pro Ser Gly Gly Gln Phe Gln Thr Phe Pro Asn Ser Ser  
610 615 620

Phe Glu Ser Asn His Leu Cys Gly Glu His Arg Phe Pro Cys Ser Glu  
625 630 635 640

Gly Thr Glu Ser Ala Leu Ile Lys Arg Ser Arg Arg Ser Arg Gly Gly  
645 650 655

Asp Ile Gly Met Ala Ile Gly Ile Ala Phe Gly Ser Val Phe Leu Leu  
660 665 670

Thr Leu Leu Ser Leu Ile Val Leu Arg Ala Arg Arg Arg Ser Gly Glu  
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Val Asp Pro Glu Ile Glu Glu Ser Glu Ser Met Asn Arg Lys Glu Leu  
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Gly Glu Ile Gly Ser Lys Leu Val Val Leu Phe Gln Ser Asn Asp Lys  
705 710 715 720

Glu Leu Ser Tyr Asp Asp Leu Leu Asp Ser Thr Asn Ser Phe Asp Gln  
725 730 735

Ala Asn Ile Ile Gly Cys Gly Gly Phe Gly Met Val Tyr Lys Ala Thr  
740 745 750

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755 760 765

Gly Gln Ile Glu Arg Glu Phe Glu Ala Glu Val Glu Thr Leu Ser Arg  
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Ala Gln His Pro Asn Leu Val Leu Leu Arg Gly Phe Cys Phe Tyr Lys  
785 790 795 800

Asn Asp Arg Leu Leu Ile Tyr Ser Tyr Met Glu Asn Gly Ser Leu Asp  
805 810 815

Tyr Trp Leu His Glu Arg Asn Asp Gly Pro Ala Leu Leu Lys Trp Lys  
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 Thr Arg Leu Arg Ile Ala Gln Gly Ala Ala Lys Gly Leu Leu Tyr Leu  
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 His Glu Gly Cys Asp Pro His Ile Leu His Arg Asp Ile Lys Ser Ser  
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 Val Gly Thr Leu Gly Tyr Ile Pro Pro Glu Tyr Gly Gln Ala Ser Val  
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 Ala Thr Tyr Lys Gly Asp Val Tyr Ser Phe Gly Val Val Leu Leu Glu  
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 Leu Leu Thr Asp Lys Arg Pro Val Asp Met Cys Lys Pro Lys Gly Cys  
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 Ser Glu Val Phe Asp Pro Leu Ile Tyr Ser Lys Glu Asn Asp Lys Glu  
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Ile Phe Phe Lys Leu Gln Asp Asp Pro Arg Asn Trp Ala Arg Leu Ala
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Cys Val Cys Thr Lys Phe Ser Ser Ile Val Arg Asn Val Cys Cys Lys
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Thr Gln Cys Tyr Ser Ala Ile Pro Thr Val Ile Ser Asp Leu Leu Pro
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Leu Pro Pro Ser Ala Ala Ala Ser Ala Ser Ser Thr Ala Ala Asp
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047-E2F-PCT.ST25.txt

Ser Ser Leu Thr Pro Pro Gly Gly Trp Ala Ser Leu Tyr Lys Leu Ala  
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Val Cys Cys Pro Gly Leu Phe His Ala Gly Ile Leu Leu Glu Asn Ser  
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Asp Phe Gly Leu Glu Arg Glu Leu Gly Pro Asp Gln Asn Leu Asp Pro  
115 120 125

Lys Pro Thr Thr Thr Asp Leu Ala Leu Asn Asp Glu Glu Val Ser Lys  
130 135 140

Pro Val Gly Ser Gly Leu Glu Thr Thr Ser Phe Trp Ser Leu Tyr Asp  
145 150 155 160

Asp Leu Tyr Thr Asp Thr Ile Pro Ala Pro Pro Pro Glu Asp Ser Ile  
165 170 175

Asp Asp Gln Glu Glu Glu Ile Glu Thr Ser Glu Ile Arg Pro Gly Arg  
180 185 190

Asp Leu Pro Val Arg Lys Arg Arg Lys Ile Cys Arg Ser Leu Gly Ser  
195 200 205

His Leu Ala Ser Gly Gly Trp Asn Leu Ser Arg Glu Gln Gly Asn Lys  
210 215 220

Leu Leu Ala Ser Arg Phe Arg Gly Asp Cys Leu Tyr Ile Cys Asn Trp  
225 230 235 240

Pro Gly Cys Ile His Val Glu Glu Lys Arg Asn Tyr Met Leu Phe Arg  
245 250 255

Gly Val Phe Lys Asp Phe Lys Arg Ser Arg Val Trp Arg Thr Ile Asn  
260 265 270

Asp Gly Asn Arg Ser Lys Thr Ser Gly Leu Lys Cys Ala Phe Cys Leu  
275 280 285

Cys Asp Glu Thr Trp Asp Leu His Ser Ser Phe Cys Leu Arg Arg Val  
290 295 300

Phe Gly Phe His Asp Asp Gly Glu Pro Val Val Arg Ala Tyr Val Cys  
305 310 315 320

Glu Asn Gly His Val Ser Gly Ala Trp Thr Ala Leu Pro Leu Tyr Thr  
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&lt;210&gt; 485

&lt;211&gt; 1998

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 485

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<210> 486

<211> 665

<212> PRT

<213> Arabidopsis thaliana

<400> 486

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35 40 45

Arg Ser Gly Val Met Glu Arg Arg Ile Ala Glu Ala Ser Lys Glu Gly  
50 55 60

Asp Asp Lys Cys Leu Ile Glu Ile Ser Asp Leu Pro Gly Gly Asp Lys  
65 70 75 80

Thr Phe Glu Leu Val Ala Lys Phe Cys Tyr Gly Val Lys Leu Glu Leu  
85 90 95

Thr Ala Ser Asn Val Val Tyr Leu Arg Cys Ala Ala Glu His Leu Glu  
100 105 110

Met Thr Glu Glu His Gly Glu Gly Asn Leu Ile Ser Gln Thr Glu Thr  
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 Thr Lys Lys Cys Ile Glu Ser Leu Ala Met Arg Ala Ser Thr Asp Pro  
 165 170 175  
 Asn Leu Phe Gly Trp Pro Val Val Glu His Gly Gly Pro Met Gln Ser  
 180 185 190  
 Pro Gly Gly Ser Val Leu Trp Asn Gly Ile Ser Thr Gly Ala Arg Pro  
 195 200 205  
 Lys His Thr Ser Ser Asp Trp Trp Tyr Glu Asp Ala Ser Met Leu Ser  
 210 215 220  
 Phe Pro Leu Phe Lys Arg Leu Ile Thr Val Met Glu Ser Arg Gly Ile  
 225 230 235 240  
 Arg Glu Asp Ile Ile Ala Gly Ser Leu Thr Tyr Tyr Thr Arg Lys His  
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 Ser His Thr Met Glu Thr Leu Tyr Asp Val Asp Ser Val Gln Arg Ile  
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047-E2F-PCT.ST25.txt

Ser Pro Cys Ser Ser Val Asp Asp Gly Asn Leu Ile Gly Ser Pro Gln  
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Ser Ile Thr Pro Met Thr Ala Val Ala Lys Leu Ile Asp Gly Tyr Leu  
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Ala Glu Val Ala Pro Asp Val Asn Leu Lys Leu Pro Lys Phe Gln Ala  
420 425 430

Leu Ala Ala Ser Ile Pro Glu Tyr Ala Arg Leu Leu Asp Asp Gly Leu  
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Tyr Arg Ala Ile Asp Ile Tyr Leu Lys His His Pro Trp Leu Ala Glu  
450 455 460

Thr Glu Arg Glu Asn Leu Cys Arg Leu Leu Asp Cys Gln Lys Leu Ser  
465 470 475 480

Leu Glu Ala Cys Thr His Ala Ala Gln Asn Glu Arg Leu Pro Leu Arg  
485 490 495

Ile Ile Val Gln Val Leu Phe Phe Glu Gln Leu Gln Leu Arg Thr Ser  
500 505 510

Val Ala Gly Cys Phe Leu Val Ser Asp Asn Leu Asp Gly Gly Ser Arg  
515 520 525

Gln Leu Arg Ser Gly Gly Tyr Val Gly Gly Pro Asn Glu Gly Gly Gly  
530 535 540

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545 550 555 560

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Cys Ser Asn Met Arg Gln Glu Ile Glu Lys Leu Gly Lys Thr Thr Lys  
580 585 590

Gly Gly Gly Ser Ala Ser Asn Gly Val Gly Ser Lys Thr Trp Glu Asn  
595 600 605

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610 615 620

Cys Ser Ala Gln Glu Gly Ser Val Ser Lys Ser Asn Asn Glu Asn Val  
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625

630

635

640

Lys Ile Glu Lys Leu Lys Asp Val Lys Glu Arg Arg Gly Lys His Lys  
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Lys Ala Ser Ser Ile Ser Ser Glu Arg  
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&lt;210&gt; 487

&lt;211&gt; 1416

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 487

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<211> 471

<212> PRT

<213> Arabidopsis thaliana

<400> 488

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 35 40 45

His Ser Leu Ile Ile His Tyr His Leu His Arg Arg Leu Glu Ile Ser  
 50 55 60

Arg Pro Ser Leu Ala Asp Ala Ser Asp Ile Gly Arg Phe His Ser Pro  
 65 70 75 80

Glu Tyr Val Asp Phe Leu Ala Ser Val Ser Pro Glu Ser Met Gly Asp  
 85 90 95

Pro Ser Ala Ala Arg Asn Leu Arg Arg Phe Asn Val Gly Glu Asp Cys  
 100 105 110

Pro Val Phe Asp Gly Leu Phe Asp Phe Cys Arg Ala Ser Ala Gly Gly  
 115 120 125

Ser Ile Gly Ala Ala Val Lys Leu Asn Arg Gln Asp Ala Asp Ile Ala  
 130 135 140

Ile Asn Trp Gly Gly Gly Leu His His Ala Lys Lys Ser Glu Ala Ser  
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Gly Phe Cys Tyr Val Asn Asp Ile Val Leu Gly Ile Leu Glu Leu Leu  
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Lys Met Phe Lys Arg Val Leu Tyr Ile Asp Ile Asp Val His His Gly  
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 Asp Val Gly Ala Glu Lys Gly Lys Tyr Tyr Ala Leu Asn Val Pro Leu  
 225 230 235  
 Asn Asp Gly Met Asp Asp Glu Ser Phe Arg Ser Leu Phe Arg Pro Leu  
 245 250 255  
 Ile Gln Lys Val Met Glu Val Tyr Gln Pro Glu Ala Val Val Leu Gln  
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 325 330 335  
 Asp Asn Lys Leu Pro Tyr Asn Glu Tyr Phe Glu Tyr Phe Gly Pro Asp  
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 Tyr Thr Leu His Val Asp Pro Ser Pro Met Glu Asn Leu Asn Thr Pro  
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 Lys Asp Met Glu Arg Ile Arg Asn Thr Leu Leu Glu Gln Leu Ser Gly  
 370 375 380  
 Leu Ile His Ala Pro Ser Val Gln Phe Gln His Thr Pro Pro Val Asn  
 385 390 395 400  
 Arg Val Leu Asp Glu Pro Glu Asp Asp Met Glu Thr Arg Pro Lys Pro  
 405 410 415  
 Arg Ile Trp Ser Gly Thr Ala Thr Tyr Glu Ser Asp Ser Asp Asp Asp  
 420 425 430

047-E2F-PCT.ST25.txt

Asp Lys Pro Leu His Gly Tyr Ser Cys Arg Gly Gly Ala Thr Thr Asp  
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<211> 471

<212> DNA

<213> Arabidopsis thaliana

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<211> 156

<212> PRT

<213> Arabidopsis thaliana

<400> 490

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20 25 30

Val Trp Gln Ile Leu Gln Lys Asn Pro Thr Ser Phe Val Cys Asn Ser  
Page 761

Asp Glu Met Asp Phe Asp Asp Ala Val Ser Ala Val Ala Gly Asn Glu  
50 55 60

Glu Leu Arg Ser Gly Gln Leu Tyr Phe Val Leu Pro Leu Thr Trp Leu  
65 70 75 80

Asn His Pro Leu Arg Ala Glu Glu Met Ala Ala Leu Ala Val Lys Ala  
85 90 95

Ser Ser Ala Leu Thr Lys Ser Gly Gly Val Gly Trp Val Ser Gly Asp  
100 105 110

Asp Asp Val Thr Thr Ser Glu Lys Thr Tyr Gln Lys Lys Asn Ile Ala  
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<210> 491

<211> 702

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 492

&lt;211&gt; 233

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 492

Met Asp Leu Asn<sub>5</sub> Leu Asp Ala Pro His<sub>10</sub> Ser Met Gly Thr Thr Ile Ile<sub>15</sub>Gly Val Thr Tyr<sub>20</sub> Asn Gly Gly Val Val<sub>25</sub> Leu Gly Ala Asp Ser<sub>30</sub> Arg ThrSer Thr Gly<sub>35</sub> Met Tyr Val Ala Asn<sub>40</sub> Arg Ala Ser Asp<sub>45</sub> Lys Ile Thr GlnLeu Thr<sub>50</sub> Asp Asn Val Tyr Val<sub>55</sub> Cys Arg Ser Gly Ser<sub>60</sub> Ala Ala Asp SerGln Val Val Ser Asp Tyr<sub>70</sub> Val Arg Tyr Phe<sub>75</sub> Leu His Gln His Thr Ile<sub>80</sub>Gln His Gly Gln Pro<sub>85</sub> Ala Thr Val Lys Val<sub>90</sub> Ser Ala Asn Leu Ile Arg<sub>95</sub>Met Leu Ala Tyr<sub>100</sub> Asn Asn Lys Asn Met<sub>105</sub> Leu Gln Thr Gly Leu Ile Val<sub>110</sub>Gly Gly Trp<sub>115</sub> Asp Lys Tyr Glu Gly<sub>120</sub> Gly Lys Ile Tyr Gly<sub>125</sub> Ile Pro LeuGly Gly Thr Val Val Glu Gln<sub>135</sub> Pro Phe Ala Ile Gly<sub>140</sub> Gly Ser Gly SerSer Tyr Leu Tyr Gly Phe Phe Asp Gln Ala Trp<sub>155</sub> Lys Asp Asn Met Thr<sub>160</sub>Lys Glu Glu Ala Glu<sub>165</sub> Gln Leu Val Val Lys<sub>170</sub> Ala Val Ser Leu Ala Ile<sub>175</sub>Ala Arg Asp Gly<sub>180</sub> Ala Ser Gly Gly Val<sub>185</sub> Val Arg Thr Val Ile<sub>190</sub> Ile Asn

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<211> 963

<212> DNA

<213> Arabidopsis thaliana

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<210> 494

<211> 320

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 494

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 35 40 45

Gly Gly Arg Gly Arg Gly Arg Gly Pro Pro Arg Gly Gly Ala Arg Gly  
 50 55 60

Gly Arg Gly Pro Ala Gly Arg Gly Gly Met Lys Gly Gly Ser Lys Val  
 65 70 75 80

Ile Val Glu Pro His Arg His Ala Gly Val Phe Ile Ala Lys Gly Lys  
 85 90 95

Glu Asp Ala Leu Val Thr Lys Asn Leu Val Pro Gly Glu Ala Val Tyr  
 100 105 110

Asn Glu Lys Arg Ile Ser Val Gln Asn Glu Asp Gly Thr Lys Thr Glu  
 115 120 125

Tyr Arg Val Trp Asn Pro Phe Arg Ser Lys Leu Ala Ala Ile Leu  
 130 135 140

Gly Gly Val Asp Asn Ile Trp Ile Lys Pro Gly Ala Lys Val Leu Tyr  
 145 150 155 160

Leu Gly Ala Ala Ser Gly Thr Thr Val Ser His Val Ser Asp Leu Val  
 165 170 175

Gly Pro Glu Gly Cys Val Tyr Ala Val Glu Phe Ser His Arg Ser Gly  
 180 185 190

Arg Asp Leu Val Asn Met Ala Lys Lys Arg Thr Asn Val Ile Pro Ile  
 195 200 205

Ile Glu Asp Ala Arg His Pro Ala Lys Tyr Arg Met Leu Val Gly Met  
 210 215 220

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Val Asp Val Ile Phe Ser Asp Val Ala Gln Pro Asp Gln Ala Arg Ile  
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Ile Ser Ile Lys Ala Asn Cys Ile Asp Ser Thr Val Pro Ala Glu Ala  
260 265 270

Val Phe Gln Thr Glu Val Lys Lys Leu Gln Gln Glu Gln Phe Lys Pro  
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<211> 1152

<212> DNA

<213> Arabidopsis thaliana

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<210> 496

<211> 383

<212> PRT

<213> Arabidopsis thaliana

<400> 496

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 20 25 30

Asp Val Thr Val Ala Val Val Lys Lys Pro Gln Pro Gly Leu Ser Ser  
 35 40 45

Gln Ser Pro Ser Met Asn Ala Leu Ala Leu Val Val His Thr Pro Ser  
 50 55 60

Val Thr Gly Gly Gly Gly Ser Gly Asn Arg Asn Gly Arg Gly Gly Gly  
 65 70 75 80

Gly Gly Ser Gly Gly Gly Gly Gly Arg Asp Asp Cys Trp Ser Glu  
 85 90 95

Glu Ala Thr Lys Val Leu Ile Glu Ala Trp Gly Asp Arg Phe Ser Glu  
 100 105 110

Pro Gly Lys Gly Thr Leu Lys Gln Gln His Trp Lys Glu Val Ala Glu  
 115 120 125

Ile Val Asn Lys Ser Arg Gln Cys Lys Tyr Pro Lys Thr Asp Ile Gln  
 130 135 140

Cys Lys Asn Arg Ile Asp Thr Val Lys Lys Lys Tyr Lys Gln Glu Lys  
 Page 767

145 150 160

Ala Lys Ile Ala Ser Gly Asp Gly Pro Ser Lys Trp Val Phe Phe Lys  
165 170 175

Lys Leu Glu Ser Leu Ile Gly Gly Thr Thr Thr Phe Ile Ala Ser Ser  
180 185 190

Lys Ala Ser Glu Lys Ala Pro Met Gly Gly Ala Leu Gly Asn Ser Arg  
195 200 205

Ser Ser Met Phe Lys Arg Gln Thr Lys Gly Asn Gln Ile Val Gln Gln  
210 215 220

Gln Gln Glu Lys Arg Gly Ser Asp Ser Met Arg Trp His Phe Arg Lys  
225 230 235 240

Arg Ser Ala Ser Glu Thr Glu Ser Glu Ser Asp Pro Glu Pro Glu Ala  
245 250 255

Ser Pro Glu Glu Ser Ala Glu Ser Leu Pro Pro Leu Gln Pro Ile Gln  
260 265 270

Pro Leu Ser Phe His Met Pro Lys Arg Leu Lys Val Asp Lys Ser Gly  
275 280 285

Gly Gly Gly Ser Gly Val Gly Asp Val Ala Arg Ala Ile Leu Gly Phe  
290 295 300

Thr Glu Ala Tyr Glu Lys Ala Glu Thr Ala Lys Leu Lys Leu Met Ala  
305 310 315 320

Glu Leu Glu Lys Glu Arg Met Lys Phe Ala Lys Glu Met Glu Leu Gln  
325 330 335

Arg Met Gln Phe Leu Lys Thr Gln Leu Glu Ile Thr Gln Asn Asn Gln  
340 345 350

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355 360 365

Asp Asp Asp Asp Arg Asn Gly Lys Asn Asn Gly Asn Val Ser Ser  
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<210> 497

<211> 822

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 497

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&lt;210&gt; 498

&lt;211&gt; 273

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 498

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Met Ser Ile Glu Glu Glu Asn Val Pro Thr Thr Val Asp Ser Gly Ala
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Ala Asp Thr Thr Val Lys Ser Pro Glu Lys Lys Pro Ala Ala Lys Gly
20     25     30
Gly Lys Ser Lys Lys Thr Thr Thr Ala Lys Ala Thr Lys Lys Pro Val
35     40     45
Lys Ala Ala Ala Pro Thr Lys Lys Lys Thr Thr Ser Ser His Pro Thr
50     55     60

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Tyr Glu Glu Met Ile Lys Asp Ala Ile Val Thr Leu Lys Glu Arg Thr  
65 70 75 80

Gly Ser Ser Gln Tyr Ala Ile Gln Lys Phe Ile Glu Glu Lys His Lys  
85 90 95

Ser Leu Pro Pro Thr Phe Arg Lys Leu Leu Leu Val Asn Leu Lys Arg  
100 105 110

Leu Val Ala Ser Glu Lys Leu Val Lys Val Lys Ala Ser Phe Lys Ile  
115 120 125

Pro Ser Ala Arg Ser Ala Thr Pro Lys Pro Ala Ala Pro Val Lys  
130 135 140

Lys Lys Ala Thr Val Val Ala Lys Pro Lys Gly Lys Val Ala Ala Ala  
145 150 155 160

Val Ala Pro Ala Lys Ala Lys Ala Ala Lys Gly Thr Lys Lys Pro  
165 170 175

Ala Ala Lys Val Val Ala Lys Ala Lys Val Thr Ala Lys Pro Lys Ala  
180 185 190

Lys Val Thr Ala Ala Lys Pro Lys Ser Lys Ser Val Ala Ala Val Ser  
195 200 205

Lys Thr Lys Ala Val Ala Lys Pro Lys Ala Lys Glu Arg Pro Ala  
210 215 220

Lys Ala Ser Arg Thr Ser Thr Arg Thr Ser Pro Gly Lys Lys Val Ala  
225 230 235 240

Ala Pro Ala Lys Lys Val Ala Val Thr Lys Lys Ala Pro Ala Lys Ser  
245 250 255

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260 265 270

Lys

<210> 499

<211> 1383

<212> DNA



<213> *Arabidopsis thaliana*

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tcaacctccc atggatcgaa tccggttttc atcgatcgtg acccgagatg ttctgccgtc    180
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caagagctac tagatgaggg tatgtattac ggcgtcgaat cactcctcag attggcgatg    300
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taa

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&lt;210&gt; 500

&lt;211&gt; 460

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 500

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 20 25 30  
 Ser Leu Leu Ala Ala Leu Ser Thr Thr Ser His Gly Ser Asn Pro  
 35 40 45  
 Val Phe Ile Asp Arg Asp Pro Glu Ile Phe Ala Val Ile Leu Asn Leu  
 50 55 60  
 Leu Arg Thr Gly Arg Leu Pro Ala Asn Ser Ser Gly Val Phe Ser Lys  
 65 70 75 80  
 Gln Glu Leu Leu Asp Glu Ala Met Tyr Tyr Gly Val Glu Ser Leu Leu  
 85 90 95  
 Arg Leu Ala Met Leu Pro Pro Pro Leu Leu Gly Phe Asp Ala Ser Leu  
 100 105 110  
 Val Ser Thr Ile Val Pro Ala Ala Asp Gly Val Pro Ser Ala Leu Thr  
 115 120 125  
 Ala Thr Ala Gly Asp Ala Ser Leu Trp Ile Ala His Gly Gly Gln Ile  
 130 135 140  
 Ser Val Tyr Asp Trp Ser Leu Ser His Ala Gly Thr Val Arg Thr His  
 145 150 155 160  
 Leu Asn Asp Ile Thr Ser Ile Cys Arg Val Trp Gly Glu Ala Ala Ala  
 165 170 175  
 Ile Gly Ser Gly Ser Ala Ser Gly Leu His Phe Tyr Asp Leu Ser Gly  
 180 185 190  
 Gly Arg Tyr Ile Gly Ser Thr His Trp Thr Asp Pro Glu Asp Pro Arg  
 195 200 205  
 Ile His Lys Ala Arg Val Ala Ala Val Ala Asp Ser Glu Gly Gly Val  
 210 215 220  
 Phe Ala Ser Phe Asp Cys Leu His Arg Glu Asn Ser Val Leu Gln Ile  
 225 230 235 240

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Asp Lys Ser Thr Leu Gln Val Ala Ala Val Ile Gly Gln Gln Ser Gly  
245 250 255

Asn Ser Ala Lys Thr Thr Val Pro Glu Lys Leu Arg Trp Leu Pro Ala  
260 265 270

Lys Gly Leu Leu Val Gly Ser Ala Val Gln Arg Gly Val Phe Gly Cys  
275 280 285

Ser Gly Tyr Ile Arg Ile Trp Asp Pro Arg Ser Arg Asn Ile Val Trp  
290 295 300

Glu Thr Asn Glu Pro Gly Ser Gly Arg Ser Thr Arg Phe Gly Asp Ala  
305 310 315 320

Leu Ala Asp Met Asp Val Asp Val Glu Asp Ser Ile Leu Phe Lys Val  
325 330 335

Cys Ser Lys Ser Gly Asp Leu Gly Met Ala Asp Ile Arg Lys Leu Gly  
340 345 350

Glu Asp Pro Trp Val Tyr Met Ser Asp Glu Asn Pro Gly Ala Trp Lys  
355 360 365

Ala Gly Asp Gly Gly Gly Tyr Ser Val Val His Cys Tyr Arg Lys Gln  
370 375 380

Val Leu Ala Ala Arg Gly Gly Ala Leu Glu Val Trp Ser Ser Val Lys  
385 390 395 400

Glu Lys Thr Ser Gly Asp Pro Ile Arg Arg Arg Asn Phe Val Asp Lys  
405 410 415

Glu Asp Asp Ser Lys Arg Gly Met Ile Ser Lys Ile Glu Ala Gly Gly  
420 425 430

Asp Arg Leu Phe Val Ser Arg Glu Cys Met Glu Gly Val Glu Val Trp  
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<211> 1230

<212> DNA

<213> Arabidopsis thaliana

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tctctcaatg ctctttctgc gcctatgggt ggtcgggttaa agaggctata cgaatcatgg   240
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ggtcgagatg tcttgctctt ttatcactcg atcaatgaag gaaatactga agaactctaaa   360
ctctttttcg agaacttgta caagtttgta tacctccaag gaacgtattt aaaaccaaata  420
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gataaagact ttgctccaaa gtgggatcct ccacgcctag aagatgtgag caaagacatg  1140
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<211> 409

<212> PRT

<213> *Arabidopsis thaliana*

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 35 40 45  
 Ala Lys Ser Arg Ala Ala Ile Leu Asn Asn Pro Ser Ser Leu Asn Ala  
 50 55 60  
 Leu Ser Ala Pro Met Val Gly Arg Leu Lys Arg Leu Tyr Glu Ser Trp  
 65 70 75 80  
 Glu Glu Asn Pro Ala Ile Ser Phe Val Leu Met Lys Gly Ser Gly Lys  
 85 90 95  
 Thr Phe Cys Ser Gly Ala Asp Val Leu Ser Leu Tyr His Ser Ile Asn  
 100 105 110  
 Glu Gly Asn Thr Glu Glu Ser Lys Leu Phe Phe Glu Asn Leu Tyr Lys  
 115 120 125  
 Phe Val Tyr Leu Gln Gly Thr Tyr Leu Lys Pro Asn Ile Ala Ile Met  
 130 135 140  
 Asp Gly Val Thr Met Gly Cys Gly Gly Gly Ile Ser Leu Pro Gly Met  
 145 150 155 160  
 Phe Arg Val Ala Thr Asp Lys Thr Val Leu Ala His Pro Glu Val Gln  
 165 170 175  
 Ile Gly Phe His Pro Asp Ala Gly Ala Ser Tyr Tyr Leu Ser Arg Leu  
 180 185 190  
 Pro Gly Tyr Leu Gly Glu Tyr Leu Ala Leu Thr Gly Gln Lys Leu Asn  
 195 200 205  
 Gly Val Glu Met Ile Ala Cys Gly Leu Ala Thr His Tyr Cys Leu Asn  
 210 215 220  
 Ala Arg Leu Pro Leu Ile Glu Glu Arg Ile Gly Lys Leu Leu Thr Asp  
 225 230 235 240  
 Asp Pro Ala Val Ile Glu Asp Ser Leu Ala Gln Tyr Gly Asp Leu Val  
 245 250 255  
 Tyr Pro Asp Ser Ser Ser Val Leu His Lys Ile Glu Leu Ile Asp Lys  
 260 265 270

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Tyr Phe Gly Leu Asp Thr Val Glu Glu Ile Ile Glu Ala Met Glu Asn  
275 280 285

Glu Ala Ala Asn Ser Cys Asn Glu Trp Cys Lys Lys Thr Leu Lys Gln  
290 295 300

Ile Lys Glu Ala Ser Pro Leu Ser Leu Lys Ile Thr Leu Gln Ser Ile  
305 310 315 320

Arg Glu Gly Arg Phe Gln Thr Leu Asp Gln Cys Leu Thr His Glu Tyr  
325 330 335

Arg Ile Ser Ile Cys Gly Val Ser Lys Val Val Ser Gly Asp Phe Cys  
340 345 350

Glu Gly Ile Arg Ala Arg Leu Val Asp Lys Asp Phe Ala Pro Lys Trp  
355 360 365

Asp Pro Pro Arg Leu Glu Asp Val Ser Lys Asp Met Val Asp Cys Tyr  
370 375 380

Phe Thr Pro Ala Ser Glu Leu Asp Asp Ser Asp Ser Glu Leu Lys Leu  
385 390 395 400

Pro Thr Ala Gln Arg Glu Pro Tyr Phe  
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<211> 783

<212> DNA

<213> Arabidopsis thaliana

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 tttggttctg ttaagacgtg gactatgatt gttaatgttg actgtgatgt aacggtggat 720  
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<210> 504

<211> 260

<212> PRT

<213> Arabidopsis thaliana

<400> 504

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 20 25 30

Pro Pro Ser Thr Tyr Val Ile Gln Val Pro Lys Asp Gln Ile Tyr Arg  
 35 40 45

Ile Pro Pro Pro Glu Asn Ala His Arg Phe Glu Gln Leu Ser Arg Lys  
 50 55 60

Lys Thr Asn Arg Ser Asn Cys Arg Cys Cys Phe Cys Ser Phe Leu Ala  
 65 70 75 80

Ala Val Phe Ile Leu Ile Val Leu Ala Gly Ile Ser Phe Ala Val Leu  
 85 90 95

Tyr Leu Ile Tyr Arg Pro Glu Ala Pro Lys Tyr Ser Ile Glu Gly Phe  
 100 105 110

Ser Val Ser Gly Ile Asn Leu Asn Ser Thr Ser Pro Ile Ser Pro Ser  
 115 120 125

Phe Asn Val Thr Val Arg Ser Arg Asn Gly Asn Gly Lys Ile Gly Val  
 130 135 140

Tyr Tyr Glu Lys Glu Ser Ser Val Asp Val Tyr Tyr Asn Asp Val Asp  
 Page 777

145 150 160

Ile Ser Asn Gly Val Met Pro Val Phe Tyr Gln Pro Ala Lys Asn Val  
165 170 175

Thr Val Val Lys Leu Val Leu Ser Gly Ser Lys Ile Gln Leu Thr Ser  
180 185 190

Gly Met Arg Lys Glu Met Arg Asn Glu Val Ser Lys Lys Thr Val Pro  
195 200 205

Phe Lys Leu Lys Ile Lys Ala Pro Val Lys Ile Lys Phe Gly Ser Val  
210 215 220

Lys Thr Trp Thr Met Ile Val Asn Val Asp Cys Asp Val Thr Val Asp  
225 230 235 240

Lys Leu Thr Ala Pro Ser Arg Ile Val Ser Arg Lys Cys Ser His Asp  
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Val Asp Leu Trp  
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<210> 505

<211> 858

<212> DNA

<213> Arabidopsis thaliana

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<210> 506

<211> 285

<212> PRT

<213> *Arabidopsis thaliana*

<400> 506

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 20 25 30

Gly His Ser Asn Trp Arg Ala Leu Pro Lys Gln Ala Gly Leu Leu Arg  
 35 40 45

Cys Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu Lys Pro Asp  
 50 55 60

Ile Lys Arg Gly Asn Phe Thr Lys Glu Glu Glu Asp Ala Ile Ile Ser  
 65 70 75 80

Leu His Gln Ile Leu Gly Asn Arg Trp Ser Ala Ile Ala Ala Lys Leu  
 85 90 95

Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Val Trp His Thr His Leu  
 100 105 110

Lys Lys Arg Leu Glu Asp Tyr Gln Pro Ala Lys Pro Lys Thr Ser Asn  
 115 120 125

Lys Lys Lys Gly Thr Lys Pro Lys Ser Glu Ser Val Ile Thr Ser Ser  
 130 135 140

Asn Ser Thr Arg Ser Glu Ser Glu Leu Ala Asp Ser Ser Asn Pro Ser  
 145 150 155 160

Gly Glu Ser Leu Phe Ser Thr Ser Pro Ser Thr Ser Glu Val Ser Ser  
 Page 779

Met Thr Leu Ile Ser His Asp Gly Tyr Ser Asn Glu Ile Asn Met Asp  
 180 185 190

Asn Lys Pro Gly Asp Ile Ser Thr Ile Asp Gln Glu Cys Val Ser Phe  
 195 200 205

Glu Thr Phe Gly Ala Asp Ile Asp Glu Ser Phe Trp Lys Glu Thr Leu  
 210 215 220

Tyr Ser Gln Asp Glu His Asn Tyr Val Ser Asn Asp Leu Glu Val Ala  
 225 230 235 240

Gly Leu Val Glu Ile Gln Gln Glu Phe Gln Asn Leu Gly Ser Ala Asn  
 245 250 255

Asn Glu Met Ile Phe Asp Ser Glu Met Asp Phe Trp Phe Asp Val Leu  
 260 265 270

Ala Arg Thr Gly Gly Glu Gln Asp Leu Leu Ala Gly Leu  
 275 280 285

&lt;210&gt; 507

&lt;211&gt; 1140

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 507

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ccgtgttttc cagtgatctt cggccatgaa gctggaggga ttgttgagag tgttgagaaa	240
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gctaagatca atccggatgc tcctcttgac aaggtctgta ttgtcagttg tggtttgtct	540
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130

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140

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 Page 793

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&lt;211&gt; 393

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 518

047-E2F-PCT.ST25.txt

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35 40 45

Asn Leu His Thr Ala Ala Ser Ala Ala Ala Thr Ser Asp Ser Pro  
50 55 60

Ser Ser Ala Ala Ala Asn Gln Trp Leu Ser Arg Ser Ser Ser Phe Leu  
65 70 75 80

Gln Arg Gly Asn Thr Ala Asn Asn Asn Asn Asn Glu Thr Ser Gly Asp  
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Val Ile Glu Asp Val Pro Gly Gly Glu Glu Ser Met Ile Gly Glu Lys  
100 105 110

Lys Glu Ala Glu Arg Trp Gln Asn Ala Arg His Lys Ala Glu Ile Leu  
115 120 125

Ser His Pro Leu Tyr Glu Gln Leu Leu Ser Ala His Val Ala Cys Leu  
130 135 140

Arg Ile Ala Thr Pro Val Asp Gln Leu Pro Arg Ile Asp Ala Gln Leu  
145 150 155 160

Ala Gln Ser Gln Asn Val Val Ala Lys Tyr Ser Thr Leu Glu Ala Ala  
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Gln Gly Leu Leu Ala Gly Asp Asp Lys Glu Leu Asp His Phe Met Thr  
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Val Arg Val His Ala Met Glu Ala Val Met Ala Cys Trp Glu Ile Glu  
210 215 220

Gln Ser Leu Gln Ser Phe Thr Gly Val Ser Pro Gly Glu Gly Thr Gly  
225 230 235 240

Ala Thr Met Ser Glu Asp Glu Asp Glu Gln Val Glu Ser Asp Ala His  
245 250 255

047-E2F-PCT.ST25.txt

Leu Phe Asp Gly Ser Leu Asp Gly Leu Gly Phe Gly Pro Leu Val Pro  
260 265 270

Thr Glu Ser Glu Arg Ser Leu Met Glu Arg Val Arg Gln Glu Leu Lys  
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His Glu Leu Lys Gln Gly Tyr Lys Glu Lys Ile Val Asp Ile Arg Glu  
290 295 300

Glu Ile Leu Arg Lys Arg Arg Ala Gly Lys Leu Pro Gly Asp Thr Thr  
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Ser Val Leu Lys Ser Trp Trp Gln Ser His Ser Lys Trp Pro Tyr Pro  
325 330 335

Thr Glu Glu Asp Lys Ala Arg Leu Val Gln Glu Thr Gly Leu Gln Leu  
340 345 350

Lys Gln Ile Asn Asn Trp Phe Ile Asn Gln Arg Lys Arg Asn Trp His  
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<210> 519

<211> 5268

<212> DNA

<213> Arabidopsis thaliana

<400> 519

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&lt;210&gt; 520

&lt;211&gt; 1755

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 520

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His Phe Gly Ile Gly Leu Ala Asn Thr Val Gln Ser Glu Val Thr Pro
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Tyr Leu Pro Leu Pro Ser Leu Pro Ile Phe Cys Gly Ala Ala Glu Pro
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Gly Glu Phe Lys Leu Phe Asp Glu Val Gly Gln Gly Ser Gly Tyr Arg
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047-E2F-PCT.ST25.txt

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 100 105 110  
 Val Leu Arg Cys Asn Pro Gly Ala Phe Glu Tyr Val Thr Pro Gly Pro  
 115 120 125  
 Thr Cys Asp Pro Leu Phe Thr Asn Glu Gly Pro Gln Lys Ile Ile Ser  
 130 135 140  
 Glu Pro Ser Val Pro Val Lys Met Gln Arg Gln Thr Asp Thr His Leu  
 145 150 155 160  
 Ala Arg Ser Ile Glu Pro Glu Pro Val Lys Arg Val Leu Arg Pro Asn  
 165 170 175  
 His Val Glu Asp His Ser Trp Gln His Glu Thr Leu Thr Asn Gln Ser  
 180 185 190  
 Pro Lys Asp Val Thr Ala Tyr Asp Ser Arg Pro Glu Thr Ile Thr Met  
 195 200 205  
 Asn Glu Leu Ser Ala Ser Lys Lys Pro Lys Gly Lys Lys Arg Lys  
 210 215 220  
 Asp Asp Leu Ser Ser Val Gln Pro Asp Pro Ser Val Leu Gln Glu Ser  
 225 230 235 240  
 Ile Val Gln Asn Phe Cys Glu Met Leu Glu Asp Phe Cys Gly Arg Ala  
 245 250 255  
 Glu Val Pro Gly Asp Asp Arg Asp Glu Ala Glu Trp Ser Ser Val Pro  
 260 265 270  
 Val Asp Glu Val Arg Val Leu Ile Asn Glu Leu Met Thr Ile Arg Ser  
 275 280 285  
 Lys Met Leu Leu His Met Val Pro Val Asp Ile Leu Ser Arg Leu Leu  
 290 295 300  
 Arg Thr Leu Asp His Gln Ile His Arg Ala Glu Gly Leu Ser Ile Tyr  
 Page 801

305                      310                      320

Ser Glu His Ser Asp Ser Asp Ser Val Leu Leu Val Leu Gly Ala Leu  
325                      330

Glu Ser Ile His Ala Ser Leu Ala Val Met Ala Asn Ser Asp Met Pro  
340                      345

Lys Gln Leu Tyr Lys Glu Glu Ile Ile Glu Arg Ile Leu Glu Phe Ser  
355                      360

Arg His Gln Met Met Ala Val Met Ser Ala Tyr Asp Pro Ser Tyr Arg  
370                      375

Thr Gly Ser Lys Pro Ala Glu Asn Leu Ala Phe Glu Gly Asp Asp Asp  
385                      390                      395                      400

Asp Asp Asn Pro Asp His Asp Met Gly Ser Ala Ser Lys Arg Arg Arg  
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Ile Val Lys Asn Ser Lys Val Lys Lys Ala Ser Val Asn Ser Lys Tyr  
420                      425                      430

Cys Thr Thr Glu Thr Leu His Tyr Ser Trp Leu Thr Gln Gly Pro Val  
435                      440                      445

Val Gly Arg Lys Leu Pro Ser Ser Lys Arg Ala Leu Arg Ala Tyr Leu  
450                      455                      460

Leu Pro Asp Glu Glu Gln Arg Gln Ile Gln Met Val Thr Ala Leu Leu  
465                      470                      475                      480

Ile Gln Leu Val His Asn Ser Thr Ser Leu Pro Glu Thr Ser Arg Gln  
485                      490                      495

Ala Ala Ser Gly Asn Ser Ile Leu Glu Thr Ser Val Asp Val Gly Tyr  
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Leu Thr Lys Cys His Glu Ala Ala Thr Glu Thr Cys Cys Leu Phe Trp  
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Thr Arg Val Leu Glu Arg Phe Thr Ser Phe Lys Gly Gln Asp Ala Ser  
530                      535                      540

Glu Ile Lys Leu Ile Ile Glu Asn Leu Val Met Asp Leu Leu Thr Ala  
545                      550                      555                      560



047-E2F-PCT.ST25.txt

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Cys Val Ile Leu Leu His Asn Ala Gly Leu Lys Ser Lys Asp Val Ser  
580 585 590

Ala Arg Ile Met Ala Ile Glu Leu Leu Gly Thr Ile Ala Ala Arg Leu  
595 600 605

Lys Arg Asp Ala Val Leu Cys Ser Lys Asp Arg Phe Trp Thr Leu Leu  
610 615 620

Glu Ser Asp Ser Glu Ile Ser Val Asp Gln Glu Leu Asp Ile Ser Ser  
625 630 635 640

Arg Asn Trp His Cys Pro Leu Cys Val Cys Lys Arg Gln Leu Leu Val  
645 650 655

Leu Gln Ser Tyr Cys Lys Thr Asp Thr Lys Gly Thr Gly Lys Leu Glu  
660 665 670

Ser Glu Glu Ser Ile Glu Asn Pro Ser Met Ile Thr Lys Thr Glu Val  
675 680 685

Val Gln Gln Met Leu Leu Asn Tyr Leu Gln Asp Val Gly Ser Ala Asp  
690 695 700

Asp Val His Thr Phe Ile Cys Trp Phe Tyr Leu Cys Leu Trp Tyr Lys  
705 710 715 720

Asp Val Pro Lys Ser Gln Asn Lys Phe Lys Tyr Tyr Ile Ala Arg Leu  
725 730 735

Lys Ala Lys Ser Ile Ile Arg Asn Ser Gly Ala Thr Thr Ser Phe Leu  
740 745 750

Thr Arg Asp Ala Ile Lys Gln Ile Thr Leu Ala Leu Gly Met Asn Ser  
755 760 765

Ser Phe Ser Arg Gly Phe Asp Lys Ile Leu Asn Met Leu Leu Ala Ser  
770 775 780

Leu Arg Glu Asn Ala Pro Asn Ile Arg Ala Lys Ala Leu Arg Ala Val  
785 790 795 800

Ser Ile Ile Val Glu Ala Asp Pro Glu Val Leu Cys Asp Lys Arg Val  
805 810 815

047-E2F-PCT.ST25.txt

Gln Leu Ala Val Glu Gly Arg Phe Cys Asp Ser Ala Ile Ser Val Arg  
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Glu Ala Ala Leu Glu Leu Val Gly Arg His Ile Ala Ser His Pro Asp  
835 840 845

Val Gly Ile Lys Tyr Phe Glu Lys Val Ala Glu Arg Ile Lys Asp Thr  
850 855 860

Gly Val Ser Val Arg Lys Arg Ala Ile Lys Ile Ile Arg Asp Met Cys  
865 870 875

Thr Ser Asn Pro Asn Phe Ser Glu Phe Thr Ser Ala Cys Ala Glu Ile  
885 890 895

Leu Ser Arg Ile Ser Asp Asp Glu Ser Ser Val Gln Asp Leu Val Cys  
900 905 910

Lys Thr Phe Tyr Glu Phe Trp Phe Glu Glu Pro Pro Gly His His Thr  
915 920 925

Gln Phe Ala Ser Asp Ala Ser Ser Ile Pro Leu Glu Leu Glu Lys Lys  
930 935 940

Thr Lys Gln Met Val Gly Leu Leu Ser Arg Thr Pro Asn Gln Gln Leu  
945 950 955 960

Leu Val Thr Ile Ile Lys Arg Ala Leu Ala Leu Asp Phe Phe Pro Gln  
965 970 975

Ala Ala Lys Ala Ala Gly Ile Asn Pro Val Ala Leu Ala Ser Val Arg  
980 985 990

Arg Arg Cys Glu Leu Met Cys Lys Cys Leu Leu Glu Lys Ile Leu Gln  
995 1000 1005

Val Glu Glu Met Ser Arg Glu Glu Gly Glu Val Gln Val Leu Pro  
1010 1015 1020

Tyr Val Leu Val Leu His Ala Phe Cys Leu Val Asp Pro Gly Leu  
1025 1030 1035

Cys Thr Pro Ala Ser Asp Pro Thr Lys Phe Val Ile Thr Leu Gln  
1040 1045 1050

Pro Tyr Leu Lys Ser Gln Ala Asp Ser Arg Thr Gly Ala Gln Leu  
1055 1060 1065

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 Lys His Met Ile Val Arg His Ser Phe Leu Thr Val Val His Ala  
 1100 1105 1110  
 Cys Val Ser Lys Leu Ala Gly Lys Gly Val Ser Ile Val Glu His  
 1115 1120 1125  
 Leu Leu Gln Phe Phe Phe Lys Arg Leu Glu Ala Gln Gly Ser Asp  
 1130 1135 1140  
 Asn Thr Gln Ile Ala Gly Arg Ser Leu Phe Cys Leu Gly Leu Leu  
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 Ile Arg His Gly Asn Ser Leu Ile Ser Thr Ser Gly Gly Lys Asn  
 1160 1165 1170  
 Phe Asn Leu Ser Gly Cys Leu Asn Leu Phe Lys Arg His Leu Arg  
 1175 1180 1185  
 Thr Glu Asp Ile Ala Leu Lys Val Arg Ser Leu Gln Ala Leu Gly  
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 Gly Lys Ile Ile Glu Thr Thr Leu Ala Asp Glu Ala Asn Gly Arg  
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 Met Lys Met Gln Ala Leu Gln Asn Met Tyr Glu Tyr Leu Leu Asp  
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 Asn Ser Val Glu Gln Gly Gly His Asn Val Pro Val Ala Ala Gly  
 1265 1270 1275  
 Ala Gly Asp Thr Asn Ile Cys Gly Gly Ile Val Gln Leu Phe Trp  
 1280 1285 1290  
 Asp Lys Ile Leu Gly Arg Cys Leu Asp Phe Asp Asp Gln Ile Arg  
 Page 805

1295

1300

1305

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Val His	Pro Ile Thr Cys	Val	Pro Tyr Leu Ile Ala	Leu Glu Thr
1325		1330	1335	
Asp Pro	Gln Glu Ala Asn	Gln	Lys Leu Ala His	His Leu Leu Met
1340		1345	1350	
Asn Met	His Glu Lys Tyr	Pro	Ala Phe Phe Glu Ser	Arg Leu Gly
1355		1360	1365	
Asp Gly	Leu Gln Met Ser	Phe	Ile Phe Met Gln Ser	Ile Ser Gln
1370		1375	1380	
Val Thr	Ser Glu Pro Asn	Gln	Ser Leu Gln Gln Lys	Gly Ser Thr
1385		1390	1395	
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Ala Arg	Leu Gly Val Ser	Arg	Ile Tyr Lys Leu Ile	Arg Gly Asn
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Arg Val	Ser Arg Asn Lys	Phe	Met Thr Ser Ile Val	Arg Lys Phe
1430		1435	1440	
Asp Asn	Pro Thr Trp Asn	Gly	Ser Val Ile Ser Phe	Leu Lys Tyr
1445		1450	1455	
Cys Thr	Glu Thr Leu Ala	Leu	Leu Pro Phe Thr Ser	Pro Asp Glu
1460		1465	1470	
Pro Leu	Tyr Leu Val Tyr	Ser	Ile Asn Arg Val Met	Gln Ile Arg
1475		1480	1485	
Ala Gly	Ala Val Glu Ser	Asn	Leu Lys Ala Leu Leu	His Lys Asp
1490		1495	1500	
Ser Ala	Lys Thr Gln His	Gly	Asn Gly Ala Tyr Gln	Gln Asp Pro
1505		1510	1515	
Ile Pro	Gly His Met Asn	Met	Met Asp Leu Asn Thr	Arg Ile Gln
1520		1525	1530	

Glu Glu Pro Arg His Trp Asn Ser Tyr Gly His Ala Thr Leu Ile  
1535 1540 1545

Asp Leu Asn Gly Ser Val Tyr Gln Asp Ser Arg Asp Gln Phe Thr  
1550 1555 1560

Ser Tyr Gln Val His Asn Gly Lys Ala Asp Val His Lys Met Thr  
1565 1570 1575

Ser Ser Asp Pro Pro Glu Leu Ser Thr Asp Asp Leu Gln Lys Ile  
1580 1585 1590

Gln Val Val Phe Met Ala Phe Ser Pro Val Met Leu Arg Val Asp  
1595 1600 1605

Cys Leu Ala Ala Ile Ala Ile Gln Leu Leu Leu Lys Leu Lys Arg  
1610 1615 1620

Tyr Leu Lys Val Thr Tyr Ser Leu Asn Asp Asp Arg Cys Gln Ala  
1625 1630 1635

Tyr Ser Pro Thr Glu Pro Leu Lys Pro Gly Asp Pro Leu Ser Arg  
1640 1645 1650

Gln Ser Val Ala Phe Asp Leu Ser Glu Thr Arg Thr Asp Leu Pro  
1655 1660 1665

Ser Thr Tyr Gln Asp Leu Val Gln Arg Tyr Gln Glu Phe Lys Asn  
1670 1675 1680

Ala Met Arg Glu Asp Thr Val Asp Phe Thr Ile Tyr Ser Thr Asn  
1685 1690 1695

Val Lys Arg Lys Arg Pro Thr Pro Arg Lys Thr Ser Arg Ser Ala  
1700 1705 1710

Lys Lys Thr Val Ala Tyr Asn Glu Asp Asp Asp Asp Asp Asp Asn  
1715 1720 1725

Asp Asp Arg Gly Trp His Gly Gly Gly Gly Arg Gly Ala Ala Arg  
1730 1735 1740

Arg Leu Asn Tyr Ser Thr Arg Ser Ser Asn Arg Arg  
1745 1750 1755

<210> 521

<211> 945

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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gtttcagcag aagatggagc tgacactgga gtctggcttg cattgcttcc tgatcaagct 900
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&lt;210&gt; 522

&lt;211&gt; 314

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 522

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Met Val Gly Ser Lys Glu Lys Ser Lys Glu Lys Arg Asp Lys Arg Leu
1          5          10          15

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Gln Glu Ile Ser Leu Leu Arg Thr Ile Pro Tyr Ser Asp His Gln Arg
20          25          30

```

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Trp Trp Thr Ser Glu Thr Val Ala Val Val Thr Gly Ala Asn Arg Gly
35          40          45

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047-E2F-PCT.ST25.txt

Ile Gly Phe Glu Met Val Arg Gln Leu Ala Gly His Gly Leu Thr Val  
50 55 60

Ile Leu Thr Ser Arg Asp Glu Asn Val Gly Val Glu Ala Ala Lys Ile  
65 70 75 80

Leu Gln Glu Gly Gly Phe Asn Val Asp Phe His Arg Leu Asp Ile Leu  
85 90 95

Asp Ser Ser Ser Ile Gln Glu Phe Cys Glu Trp Ile Lys Glu Lys Tyr  
100 105 110

Gly Phe Ile Asp Val Leu Ile Asn Asn Ala Gly Val Asn Tyr Asn Val  
115 120 125

Gly Ser Asp Asn Ser Val Glu Phe Ser His Met Val Ile Ser Thr Asn  
130 135 140

Tyr Tyr Gly Thr Lys Asn Ile Ile Asn Ala Met Ile Pro Leu Met Arg  
145 150 155 160

His Ala Cys Gln Gly Ala Arg Ile Val Asn Val Thr Ser Arg Leu Gly  
165 170 175

Arg Leu Lys Gly Arg His Ser Lys Leu Glu Asn Glu Asp Val Arg Ala  
180 185 190

Lys Leu Met Asp Val Asp Ser Leu Thr Glu Glu Ile Val Asp Lys Thr  
195 200 205

Val Ser Glu Phe Leu Lys Gln Val Glu Glu Gly Thr Trp Glu Ser Gly  
210 215 220

Gly Trp Pro His Ser Phe Thr Asp Tyr Ser Val Ser Lys Met Ala Val  
225 230 235 240

Asn Ala Tyr Thr Arg Val Leu Ala Lys Glu Leu Ser Glu Arg Pro Gly  
245 250 255

Gly Glu Lys Ile Tyr Ala Asn Cys Phe Cys Pro Gly Trp Val Lys Thr  
260 265 270

Ala Met Thr Gly Tyr Ala Gly Asn Val Ser Ala Glu Asp Gly Ala Asp  
275 280 285

Thr Gly Val Trp Leu Ala Leu Leu Pro Asp Gln Ala Ile Thr Gly Lys  
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290

295

047-E2F-PCT.ST25.txt  
300Phe Phe Ala Glu Arg Arg Glu Ile Ser Phe  
305 310

&lt;210&gt; 523

&lt;211&gt; 1914

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 523

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aattataact ccaagagttg tagtgaagtt taccttatgg acttatacgg caaaatcttg	240
tttacattac gtcaaaagaa attgggatta ttcaaatctt ggaaaggata taactcaacc	300
gggacaagat ttcaactaag aaaaaacttc aagatattgc caaagggttc atcttcatca	360
tacaaagttg taatgggacg gcgtatagtt gatggtgatc atcaatcttg ttataagatt	420
gtaaaacgca aatcggtttt cacaatcgag gatggatcag gaagattatt ggcagaagtt	480
aaaaagaaac aatcaaatat caaaagtta gatcttggga aagatgtatt aacaatgatg	540
gtggagccac aacttgaac tgagattttc gaagaattca tcaaaatgtg gagagaatcg	600
gcttcgttta tcctcgataa gcatcagaac acaaaaccca tttctctaac tcattcaatt	660
gattctcctc caccaccatc tgcttcaatg gcggatgaaa accctaacc taatcctatt	720
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## 047-E2F-PCT.ST25.txt

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gaaagatctg caagggacta cactcctcct cagtacttga ctctactctt cactgatctt 1860
ggtgttctca ctccatctgt agtaagtgac gagcttattc agctttactt gtaa 1914

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&lt;210&gt; 524

&lt;211&gt; 637

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 524

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Met Val Lys Ile His Pro Asp Lys Ala Phe Pro Val Asp Phe Ser Val
1          5          10

```

```

Gly Glu Gly Lys Thr Ser Pro Tyr Leu Thr Thr Glu Lys Glu Ser Phe
          20          25          30

```

```

Thr Ile Trp Met Arg Ser Leu Val Phe His Ser Lys Gly Cys Thr Val
          35          40          45

```

```

Phe Asp Ser Lys Gly Asn Leu Ile Tyr Arg Val Asp Asn Tyr Asn Ser
          50          55          60

```

```

Lys Ser Cys Ser Glu Val Tyr Leu Met Asp Leu Tyr Gly Lys Ile Leu
65          70          75          80

```

```

Phe Thr Leu Arg Gln Lys Lys Leu Gly Leu Phe Lys Ser Trp Lys Gly
          85          90          95

```

```

Tyr Asn Ser Thr Gly Thr Arg Phe Gln Leu Arg Lys Asn Phe Lys Ile
          100          105          110

```

```

Leu Pro Lys Gly Ser Ser Ser Ser Tyr Lys Val Val Met Gly Ser Arg
          115          120          125

```

047-E2F-PCT.ST25.txt

Ile Val Asp Gly Asp His Gln Ser Cys Tyr Lys Ile Val Lys Arg Lys  
130 135

Ser Val Phe Thr Ile Glu Asp Gly Ser Gly Arg Leu Leu Ala Glu Val  
145 150 155 160

Lys Lys Lys Gln Ser Asn Ile Lys Ser Leu Asp Leu Gly Lys Asp Val  
165 170 175

Leu Thr Met Met Val Glu Pro Gln Leu Glu Thr Glu Ile Phe Glu Glu  
180 185 190

Phe Ile Lys Met Trp Arg Glu Ser Ala Ser Phe Ile Leu Asp Lys His  
195 200 205

Gln Asn Asn Lys Pro Ile Ser Leu Thr His Ser Ile Asp Ser Pro Pro  
210 215 220

Pro Pro Ser Ala Ser Met Ala Asp Glu Asn Pro Asn Pro Asn Pro Ile  
225 230 235 240

Ser Ala Tyr Tyr Gln Thr Arg Ala Ala His His Gly Ile Val Thr Ser  
245 250 255

Glu Trp Leu Glu Gln Ala Gln Ala Ala Val Arg Arg Tyr Pro Asp Arg  
260 265 270

Asp Ser Leu Val Ser Gly Arg Pro Phe Ser Val Ile Glu Asp Phe Asn  
275 280 285

Ser Trp Arg Gln Gln Pro Asp Leu Ala Glu Ala Val Ala Ala Ile Arg  
290 295 300

Ala Leu Ala Ala Val Ile Arg Ala Ser Glu Ala Thr Thr Met Met Glu  
305 310 315 320

Leu Glu Ile Glu Leu Lys Lys Ala Ser Asp Thr Leu Lys Tyr Phe Gly  
325 330 335

Ser Cys Pro Asp Asp Asn Leu Gly Leu Ala Cys Gly Val Asn Gly Arg  
340 345 350

Cys Asp His His Arg Gly Ile Ala Leu Thr Cys Arg Val Val Asn Phe  
355 360 365

Ala Trp His Tyr Met Ser Glu Leu Ser Gly Gly Ser Lys Gly Lys Asp  
370 375 380

047-E2F-PCT.ST25.txt

Arg Leu Lys Val Leu Ser Phe Leu Asp Asp Val Phe Met Ser Trp Asp  
 385 390 395 400  
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 405 410 415  
 Val Thr Arg Thr Ser Ala Leu Glu Phe Glu Asp Phe Asn Ser Ala Lys  
 420 425 430  
 Ser Arg Val Leu Glu Arg Ala Glu Lys Phe Gly Glu Ile Ser Cys Lys  
 435 440 445  
 Ala Arg Thr Ile Ile Ala Met Leu Ser Gln Asp Phe Ile Phe Asp Gly  
 450 455 460  
 Cys Thr Ile Leu Val His Gly Phe Ser Arg Val Val Phe Glu Ile Leu  
 465 470 475 480  
 Lys Thr Ser Ala Gln Asn Lys Lys Leu Phe Arg Val Leu Cys Thr Gly  
 485 490 495  
 Val Leu Leu Ala Asn Glu Leu Ala Lys Leu Asp Ile Pro Val Lys Leu  
 500 505 510  
 Leu Ile Asp Ser Ala Val Ala Tyr Ser Met Asp Glu Val Asp Met Val  
 515 520 525  
 Phe Val Gly Ala Asp Gly Val Val Glu Ser Gly Gly Ile Ile Asn Met  
 530 535 540  
 Met Gly Thr Tyr Gln Ile Ala Leu Val Ala Gln Ser Met Asn Lys Pro  
 545 550 555 560  
 Val Tyr Val Ala Ala Glu Ser Tyr Lys Phe Ala Arg Leu Tyr Pro Leu  
 565 570 575  
 Asp Gln Lys Asp Leu Glu Pro Ala Leu Arg Pro Ile Asp Phe Ser Val  
 580 585 590  
 Pro Val Pro Pro Lys Val Glu Val Glu Arg Ser Ala Arg Asp Tyr Thr  
 595 600 605  
 Pro Pro Gln Tyr Leu Thr Leu Leu Phe Thr Asp Leu Gly Val Leu Thr  
 610 615 620  
 Pro Ser Val Val Ser Asp Glu Leu Ile Gln Leu Tyr Leu

625

630

635

&lt;210&gt; 525

&lt;211&gt; 1677

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 525

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ttggtggaag agatgttgga atcagagggt ctgatcagag gccgagtgc cacaatcgt	360
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gatcttggg acgagttatt tgtgtttata ttactagtgt tgaatgagag gtgcaaaaaa	1140
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atgacttggt ccgataatcc tctttacagc aactcttttg atgtcttcac cagaggtgag	1440
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 aacaacattc ggaaaacatc cctcttcctt cgtgaccctc aaaggctttc accctaa 1677

<210> 526

<211> 558

<212> PRT

<213> Arabidopsis thaliana

<400> 526

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 20 25 30

Ala Ala Lys Leu Glu Lys Leu Arg Arg Arg Gln Glu Gln Glu Glu Ala  
 35 40 45

Thr Arg Arg Thr Ala Ser Ile Ser Leu Glu Glu Asn Asp Glu Phe Ser  
 50 55 60

Asn Asn Tyr Gly Asp Val Thr Leu Thr Glu Leu Gln Ser Ser Ala Asp  
 65 70 75 80

Pro Lys Ala Gly Lys Trp Ile Glu Ala Val Glu Gly Lys Glu Trp Thr  
 85 90 95

Asp Val Ser Asp Leu Val Glu Glu Met Leu Glu Ser Glu Val Leu Ile  
 100 105 110

Arg Gly Arg Val His Thr Asn Arg Pro Thr Ser Asn Lys Leu Gly Phe  
 115 120 125

Val Val Leu Arg Glu Ser Gly Ser Thr Val Gln Cys Val Val Ser Gln  
 130 135 140

Ser Glu Lys Thr Lys Val Gly Ala Asn Met Val Lys Tyr Leu Lys Gln  
 145 150 155 160

Leu Ser Arg Glu Ser Phe Val Asp Val Ile Gly Val Val Thr Leu Pro  
 165 170 175

047-E2F-PCT.ST25.txt

Lys Glu Pro Leu Thr Gly Thr Thr Gln Gln Val Glu Ile Gln Val Arg  
 180 185 190  
 Lys Val Tyr Cys Ile Asn Lys Ser Leu Ala Lys Leu Pro Leu Ser Val  
 195 200 205  
 Glu Asp Ala Ala Arg Ser Glu Ala Asp Ile Glu Ala Ser Leu Gln Thr  
 210 215 220  
 Pro Ser Pro Ala Ala Arg Val Asn Gln Asp Thr Arg Leu Asn Tyr Arg  
 225 230 235 240  
 Val Leu Asp Leu Arg Thr Pro Ala Asn Gln Ala Ile Phe Gln Leu Gln  
 245 250 255  
 Tyr Glu Val Glu Tyr Ala Phe Arg Glu Lys Leu Arg Phe Lys Asn Phe  
 260 265 270  
 Val Gly Ile His Thr Pro Lys Leu Met Ala Gly Ser Ser Glu Gly Gly  
 275 280 285  
 Ser Ala Val Phe Arg Leu Glu Tyr Lys Gly Gln Pro Ala Cys Leu Ala  
 290 295 300  
 Gln Ser Pro Gln Leu His Lys Gln Met Ala Ile Cys Gly Asp Leu Arg  
 305 310 315 320  
 Arg Val Phe Glu Val Gly Pro Val Phe Arg Ala Glu Asp Ser Phe Thr  
 325 330 335  
 His Arg His Leu Cys Glu Phe Val Gly Leu Asp Val Glu Met Glu Ile  
 340 345 350  
 Arg Lys His Tyr Ser Glu Ile Met Asp Leu Val Asp Glu Leu Phe Val  
 355 360 365  
 Phe Ile Phe Thr Ser Leu Asn Glu Arg Cys Lys Lys Glu Leu Gln Ala  
 370 375 380  
 Val Gly Lys Gln Tyr Pro Phe Glu Pro Leu Lys Phe Leu Pro Lys Thr  
 385 390 395 400  
 Leu Arg Leu Thr Phe Glu Glu Gly Val Gln Met Leu Lys Glu Ala Gly  
 405 410 415  
 Val Glu Val Asp Pro Leu Gly Asp Leu Asn Thr Glu Ser Glu Arg Lys  
 420 425 430

Leu Gly Gln Leu Val Leu Glu Lys Tyr Asn Thr Glu Phe Tyr Ile Leu  
 435 440 445

His Arg Tyr Pro Lys Ala Val Arg Pro Phe Tyr Thr Met Thr Cys Ala  
 450 455 460

Asp Asn Pro Leu Tyr Ser Asn Ser Phe Asp Val Phe Ile Arg Gly Glu  
 465 470 475 480

Glu Ile Ile Ser Gly Ala Gln Arg Val His Ile Pro Glu Val Leu Glu  
 485 490 495

Gln Arg Ala Gly Glu Cys Gly Ile Asp Val Lys Thr Ile Ser Thr Tyr  
 500 505 510

Ile Asp Ser Phe Arg Tyr Gly Ala Pro Leu His Gly Gly Phe Gly Val  
 515 520 525

Gly Leu Glu Arg Val Val Met Leu Phe Cys Ala Leu Asn Asn Ile Arg  
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<210> 527

<211> 1785

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 528

&lt;211&gt; 594

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 528

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Met Pro Glu Lys Gly Met Ile Phe Pro Pro Val Pro Ser Gln Leu Val
1           5           10          15

```

```

Ile Leu Arg Pro Ser Pro Leu Leu Gln Trp Arg Leu Gly Ala Leu Thr
          20          25          30

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Ala Leu Val Cys Phe Leu Met Leu Val Val Trp Ser Ile Asp Gly Cys  
           35                          40                          45  
 Ser Ile Gln Ser Phe Val Gln Pro Trp Arg Phe Asn Ala Tyr Ser Val  
           50                          55                          60  
 Arg Ile Ser Pro Ser Pro Ser Pro Phe Met Ser Thr Lys Pro Asn Leu  
           65                          70                          75                          80  
 Val Ser Glu Lys Pro His Arg Gln Asn Leu Thr Leu Met Met Ala Pro  
                           85                          90                          95  
 Arg Asn Leu Val Pro Lys Lys Thr Asn Leu Thr Ser Asn Ser Thr Arg  
                           100                          105                          110  
 Val Gln Phe Glu Trp Ile Thr Ala Gly Ser Gln Lys Asn Phe Thr Ala  
                           115                          120                          125  
 Asn Leu Met Arg Gly Trp Leu Ala Pro Gly Gly Ala Pro Cys Arg Glu  
           130                          135                          140  
 Ala Lys Thr Val Glu Ile Ser Val Pro Gly Val Asp Gly Ile Asp Ser  
           145                          150                          155                          160  
 Val Glu Leu Thr Ala Gly Glu Ile His Glu Phe Lys Phe Gln Ala Ile  
                           165                          170                          175  
 Asp Glu Ser Gly Lys Asn Val Cys Ile Gly Gly Asp Tyr Phe Glu Thr  
                           180                          185                          190  
 Asp Ile Ser Gly Glu Asn Trp Lys Ser Arg Pro Pro Val Lys Asp Phe  
           195                          200                          205  
 Gly Asn Gly Thr Tyr Ser Phe Ser Leu Gln Val His Pro Glu Phe Ala  
           210                          215                          220  
 Gly Asp Phe Asn Leu Thr Val Ile Leu Leu Phe Arg His Tyr Gln Gly  
           225                          230                          235                          240  
 Leu Lys Phe Ser Thr Ser Arg Leu Gly Phe Asp Arg Lys Leu Arg Asn  
                           245                          250                          255  
 Val Arg Leu Arg Phe Val Lys Thr Pro Asp Val Thr Leu Pro Glu Leu  
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Trp Thr Arg Leu Gly Lys Asn Asp Glu Cys Gln Ile Ser Asn Asp Gly  
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 Arg Tyr Arg Cys Leu Ala Ala Asp Phe Pro Cys Arg Lys Pro Trp Cys  
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 Asp Gly Ala Val Gly Ala Ile Glu Ser Asn Gly Trp Val Tyr Ser Ser  
 325 330 335  
 His Cys Ser Phe Lys Leu Phe Ser Ala Glu Lys Ala Trp Asp Cys Leu  
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 Lys Gly Lys Trp Ile Phe Phe Trp Gly Asp Ser Asn His Val Asp Ser  
 355 360 365  
 Ile Arg Asn Leu Leu Asn Phe Val Leu Gly His Pro Glu Ile Pro Ala  
 370 375 380  
 Val Pro Arg Arg Phe Asp Met Lys Phe Ser Asn Pro Lys Asn Pro Ser  
 385 390 395 400  
 Glu Thr Val Arg Ile Thr Ser Ile Phe Asn Gly His Trp Asn Glu Thr  
 405 410 415  
 Lys Asn Tyr Gln Gly Leu Asp Ser Leu Lys Asp Arg Asp Phe Arg Glu  
 420 425 430  
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 Arg Ala Phe Ala Lys Gly Ala Glu Thr Ala Ala Ala Phe Trp Arg Glu  
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 Val Phe Asp Gly Val Lys Ser Arg Gly Leu Gln Pro Pro Glu Val Ile  
 485 490 495  
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 Arg Asp Ala Gly Leu Val Thr Ser Val Val Asp Asn Phe Asp Met Thr  
 530 535 540

Tyr Pro Trp His Tyr Asp Asn Arg Cys Asn Asp Gly Val His Tyr Gly  
545 550 555 560

Arg Ala Pro Ala Lys Met Arg Trp Arg Asp Gly Glu Ile Gly His Gln  
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Val Arg

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<211> 1284

<212> DNA

<213> Arabidopsis thaliana

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<211> 427

<212> PRT

<213> Arabidopsis thaliana

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Gly Pro Arg Thr Leu Ser Ser Gln Pro Lys Thr Phe Ala Asn Val Phe  
35 40 45

Ile Ala Ile Val Gly Ala Gly Val Leu Gly Leu Pro Tyr Thr Phe Lys  
50 55 60

Lys Thr Gly Trp Leu Leu Gly Leu Leu Thr Leu Leu Phe Val Ser Ser  
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Leu Thr Phe Phe Cys Met Met Leu Leu Val His Thr Arg Arg Lys Leu  
85 90 95

Glu Ser Leu Ser Gly Phe Asn Ser Ile Thr Ser Phe Gly Asp Leu Gly  
100 105 110

Glu Ser Val Cys Gly Pro Ala Gly Arg Leu Val Val Asp Val Met Leu  
115 120 125

Val Leu Ser Gln Ser Gly Phe Cys Val Ser Tyr Leu Ile Phe Val Ala  
130 135 140

Thr Thr Met Ala Asn Leu Leu Ser Arg Gly Thr Glu His Ile Leu Gly  
145 150 155 160

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Leu Asp Ala Ala Ser Ile Tyr Leu Trp Gly Cys Phe Pro Phe Gln Leu  
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Gly Leu Asn Ser Ile Pro Ser Leu Thr His Leu Ala Pro Leu Ser Ile  
180 185 190

Phe Ala Asp Ile Val Asp Val Ala Ala Thr Leu Val Val Met Val Gln  
195 200 205

Asp Val Phe Ile Phe Leu Lys Arg Arg Pro Pro Leu Arg Val Phe Gly  
210 215 220

Gly Val Ser Val Phe Phe Tyr Gly Leu Gly Val Ala Val Tyr Ala Phe  
225 230 235 240

Glu Gly Ile Gly Met Val Leu Pro Leu Glu Leu Glu Ala Lys Tyr Lys  
245 250 255

Asp Lys Phe Gly Arg Ala Leu Gly Leu Ala Met Gly Leu Ile Ser Ile  
260 265 270

Met Tyr Gly Ala Phe Gly Leu Leu Gly Tyr Met Ala Tyr Gly Glu Glu  
275 280 285

Thr Lys Asp Ile Ile Thr Thr Asn Leu Gly Thr Gly Val Val Ser Thr  
290 295 300

Leu Val Gln Leu Gly Leu Ala Ile Asn Leu Phe Phe Thr Phe Pro Leu  
305 310 315 320

Met Met Gln Pro Val Tyr Glu Val Val Glu Arg Arg Leu Cys Ser Ser  
325 330 335

Arg Tyr Ser Val Trp Val Arg Trp Ala Thr Val Leu Val Val Thr Leu  
340 345 350

Val Ala Leu Leu Val Pro Asn Phe Ala Asp Phe Leu Ser Leu Val Gly  
355 360 365

Ser Ser Val Cys Val Val Leu Gly Phe Val Leu Pro Ser Leu Phe His  
370 375 380

Leu Gln Ala Phe Lys Asn Glu Leu Ser Ile Thr Arg Ile Val Val Asp  
385 390 395 400

Val Leu Val Phe Leu Ile Gly Val Met Ile Ala Ile Thr Gly Thr Trp  
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Thr Ala Val His Glu Ile Leu Thr Ser Lys Ala  
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<210> 531

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<213> Arabidopsis thaliana

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<210> 532

<211> 372

<212> PRT

<213> Arabidopsis thaliana

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 20 25 30

Thr Arg Gln Arg Ser Tyr Gly Asn Val Pro Gln Pro His Ala Ala Ile  
 35 40 45

Tyr Tyr Ser Gln Arg Thr Thr Pro Gly Gly Phe Leu Ile Thr Glu Ala  
 50 55 60

Thr Gly Val Ser Asp Thr Ala Gln Gly Tyr Gln Asp Thr Pro Gly Ile  
 65 70 75 80

Trp Thr Lys Glu His Val Glu Ala Trp Lys Pro Ile Val Asp Ala Val  
 85 90 95

His Ala Lys Gly Gly Ile Phe Phe Cys Gln Ile Trp His Val Gly Arg  
 100 105 110

Val Ser Asn Ser Gly Phe Gln Pro Asn Gly Lys Ala Pro Ile Ser Cys  
 115 120 125

Ser Asp Lys Pro Leu Met Pro Gln Ile Arg Ser Asn Gly Ile Asp Glu  
 130 135 140

Ala Leu Phe Thr Pro Pro Arg Arg Leu Gly Ile Glu Glu Ile Pro Gly  
 145 150 155 160

Ile Val Asn Asp Phe Arg Leu Ala Ala Arg Asn Ala Met Glu Ala Gly  
 165 170 175

Phe Asp Gly Val Glu Ile His Gly Ala Asn Gly Tyr Leu Ile Asp Gln  
 180 185 190

Phe Met Lys Asp Thr Val Asn Asp Arg Thr Asp Glu Tyr Gly Gly Ser  
 195 200 205

Leu Gln Asn Arg Cys Lys Phe Pro Leu Glu Ile Val Asp Ala Val Ala  
 210 215 220

Lys Glu Ile Gly Pro Asp Arg Val Gly Ile Arg Leu Ser Pro Phe Ala  
 225 230 235 240

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Asp Tyr Met Glu Ser Gly Asp Thr Asn Pro Gly Ala Leu Gly Leu Tyr  
245 250 255

Met Ala Glu Ser Leu Asn Lys Tyr Gly Ile Leu Tyr Cys His Val Ile  
260 265 270

Glu Ala Arg Met Lys Thr Met Gly Glu Val His Ala Cys Pro His Thr  
275 280 285

Leu Met Pro Met Arg Lys Ala Phe Lys Gly Thr Phe Ile Ser Ala Gly  
290 295 300

Gly Phe Thr Arg Glu Asp Gly Asn Glu Ala Val Ser Lys Gly Arg Thr  
305 310 315 320

Asp Leu Val Ala Tyr Gly Arg Trp Phe Leu Ala Asn Pro Asp Leu Pro  
325 330 335

Lys Arg Phe Gln Val Asp Ala Pro Leu Asn Lys Tyr Asp Arg Pro Thr  
340 345 350

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<213> Arabidopsis thaliana

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<210> 534

<211> 532

<212> PRT

<213> Arabidopsis thaliana

<400> 534

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Glu Ser Phe Asp Glu Pro Phe Asp Gly Arg Trp Val Val Ser Glu Lys
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Ala Glu Tyr Gln Gly Val Trp Lys His Glu Lys Ser Glu Gly His Asp  
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Asp Tyr Gly Leu Leu Val Ser Glu Lys Ala Lys Lys Tyr Gly Ile Val  
65 70 75 80

Lys Glu Leu Asp Val Asp Glu Pro Leu Asn Leu Asn Glu Gly Thr Val  
85 90 95

Val Leu Gln Tyr Glu Ala Arg Phe Gln Glu Gly Leu Glu Cys Gly Gly  
100 105 110

Ala Tyr Leu Lys Tyr Leu Arg Pro Gln Glu Ala Gly Trp Val Pro Gln  
115 120 125

Gly Phe Asp Asn Asp Ser Pro Tyr Ser Ile Met Phe Gly Pro Asp Lys  
130 135 140

Cys Gly Ala Thr Asn Lys Val His Phe Ile Leu Lys His Lys Asn Pro  
145 150 155 160

Lys Ser Gly Glu Phe Val Glu His His Leu Lys Phe Pro Pro Ser Val  
165 170 175

Pro Phe Asp Met Leu Ser His Val Tyr Thr Ala Val Leu Lys Ser Asp  
180 185 190

Asn Glu Val Arg Ile Leu Val Asp Gly Glu Glu Lys Lys Lys Gly Asn  
195 200 205

Leu Leu Ser Ala Glu Asp Phe Glu Pro Pro Leu Ile Pro Ser Lys Thr  
210 215 220

Ile Pro Asp Pro Glu Asp Lys Lys Pro Glu Asp Trp Asp Glu Arg Ala  
225 230 235 240

Lys Ile Pro Asp Pro Asn Ala Val Lys Pro Asp Asp Trp Asp Glu Asp  
245 250 255

Ala Pro Met Glu Ile Glu Asp Glu Glu Ala Glu Lys Pro Glu Gly Trp  
260 265 270

Leu Asp Asp Glu Pro Val Glu Val Glu Asp Pro Glu Ala Ser Lys Pro  
275 280 285

Glu Asp Trp Asp Asp Glu Glu Asp Gly Glu Trp Glu Ala Pro Lys Val  
290 295 300

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325 330 335

Ile Asp Asn Pro Ala Tyr Lys Gly Ile Trp Lys Pro Arg Asp Ile Pro  
340 345 350

Asn Pro Asp Tyr Phe Glu Leu Glu Arg Pro Asn Leu Glu Pro Ile Ala  
355 360 365

Ala Ile Gly Ile Glu Ile Trp Thr Met Gln Asp Gly Ile Leu Phe Asp  
370 375 380

Asn Ile Leu Ile Ser Lys Asp Glu Lys Val Ala Glu Thr Tyr Arg Gln  
385 390 395 400

Ser Thr Trp Lys Pro Lys Phe Asp Val Glu Lys Glu Lys Gln Lys Ala  
405 410 415

Glu Asp Glu Ala Ala Gly Glu Ala Asp Gly Leu Lys Ser Tyr Gln Lys  
420 425 430

Lys Val Phe Asp Leu Leu Tyr Lys Val Ala Asp Ile Ser Phe Leu Ser  
435 440 445

Ala Tyr Lys Ser Lys Ile Met Glu Leu Ile Glu Lys Ala Glu Thr Gln  
450 455 460

Pro Asn Leu Thr Ile Gly Val Leu Ile Ser Ile Val Ile Val Phe Leu  
465 470 475 480

Ser Leu Phe Phe Lys Leu Ile Phe Gly Gly Ala Lys Ala Lys Val Glu  
485 490 495

Lys Lys Lys Pro Glu Thr Ala Ala Glu Thr Ser Thr Ser Glu Ala Lys  
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Arg Arg Glu Ser  
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&lt;211&gt; 2427

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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<211> 808

<212> PRT

<213> Arabidopsis thaliana

<400> 536

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 35 40 45

Ala Arg Asp Gln Ile Ser Lys Gly Gly Tyr Ser Ile Ser Leu Thr Pro  
 50 55 60

Pro Ser Ser His Ser Ser Trp Phe Thr Lys Ser Thr Phe Asp Arg Phe  
 65 70 75 80

Val Arg Phe Val Asn Thr Pro Ala Ile Ile Glu Arg Phe Ala Thr Leu  
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Glu Lys Glu Ile Leu Gln Ile Glu Asn Ser Ile Gln Ala Asn Glu Ile  
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 Asp Ser Ser Asn Leu Lys Lys Ser Asn Glu Ser Ser Lys Lys Glu Ser  
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 Met Ala Tyr Ala Arg Gly Val Val Ala Gly Tyr Glu Ile Asp Ser Ile  
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 Asp Asp Leu Ile Leu Phe Ala Asp Ala Phe Gly Ala Ser Arg Leu Arg  
 195 200 205  
 Glu Ala Cys Ile Met Tyr Lys Glu Leu Trp Lys Lys Lys His Gly Asp  
 210 215 220  
 Gly Leu Trp Met Ala Glu Leu Ala Ala Val Lys Ala Cys Ala Pro Val  
 225 230 235 240  
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 245 250 255  
 Ala Ala Leu Ser Leu Asn Gly Thr Asp Ser Met Pro Ser Asn Thr Asp  
 260 265 270  
 Asp Lys Ser Val Asn Leu Glu Gln His Pro Ser Gly Val Pro Asn Phe  
 275 280 285  
 Gln Ala Pro Met Gly Trp Pro Asn His Met Pro Gln Tyr Phe Tyr Pro  
 290 295 300  
 Ser Pro Tyr Gln Gly Tyr Pro Tyr Pro Pro Met Gln His Met Pro Asn  
 305 310 315 320  
 Gln Asn Gln Gly Asn Met Pro Trp Pro Ser Arg Gly Lys Thr Ser Lys  
 325 330 335

Lys Lys Gly Lys Gly Asp Ser Asp Gly Asp Glu Ser Ser Glu Ser Ser  
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 Glu Ser Ser Glu Ser Glu Ser Ala Ser Asp Asp Ser Ala Ser Ser Leu  
 355 360 365  
 Glu Asp Gln Gly Lys Arg His Ser Arg Thr Ser Lys Asn Ser Arg Arg  
 370 375 380  
 Ser Lys Lys Asn Arg Lys Lys Ser Ser Lys Thr Val Ile Ile Arg Asn  
 385 390 395 400  
 Ile Asn Tyr Ile Thr Pro Glu Gly Arg Asn Gly Asp Met Glu Gly Asn  
 405 410 415  
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 Arg His Asp Asp Gly Ser Asp Val His Ser Met Asp Val Ile Gly Gln  
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 Glu His Phe Thr His Arg Gly Ala Ser Val Gly Ala Asn Ser Asn Gly  
 485 490 495  
 Leu Gln Thr Lys Asn Thr Ala Ser Gly Asp Ser Ile Ile Thr Thr His  
 500 505 510  
 Lys Tyr Ile Glu Asp Gly Gly Asp Ser Phe Asp His Phe Glu Ser Glu  
 515 520 525  
 Asp Ser Ala Arg Arg Leu Pro Arg Thr Arg Asp Ser Thr Glu Glu Cys  
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 545 550 555 560  
 Met Tyr Asn Ala Thr Arg Gly Glu Ser Leu Val Lys Lys Ser Gly Ser  
 565 570 575  
 Gly Glu Asp Trp Phe Thr Ala Ser Gly Asn Arg Ala Gly Lys Pro Glu  
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Ile Asn Tyr Gly Arg Met Ser Phe Asp Asp Ser Ile Leu Thr Ser Gln  
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Gly Ser Asp Lys Ser Lys Lys Gln Glu Phe Val Asp Asp Ser Phe Met  
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Val His Ser Ser Ser Leu Ala Ala Asp Asp Leu Tyr Asp Ser Arg Trp  
625 630 635

Arg Pro Asp Met Ala Ala Asp Ile Val Leu Ala Ser Asp Val Asp Asn  
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Gly His Ala Asn Glu Lys His Asp Ser Trp Glu Pro Asn Asp Leu Cys  
660 665 670

Met Ile Pro Glu Arg Asn Ser Gly Asp Ser Leu Ala Asn Asp Tyr Ser  
675 680 685

Ile Asp Phe Ser Ala Glu Ala Asn Ala Arg Leu Ser Ser Asn Gly Thr  
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Asn Pro Glu Thr Arg Lys Ser Lys Thr Pro Ser Arg Thr Arg Ala Glu  
725 730 735

Thr Met Ser Lys Thr Ala Lys Lys Pro Thr Val Ala Ser Arg Thr Met  
740 745 750

Ala Gln Lys Asn Lys Phe Glu Lys Glu Glu Glu Met Arg Lys Arg Ile  
755 760 765

Glu Asn Leu Val Met Glu Arg Gln Lys Arg Ile Ala Glu Arg Ser Ala  
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<211> 1386

<212> DNA



<213> *Arabidopsis thaliana*

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&lt;211&gt; 461

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

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Phe Glu Asp Gly Leu Arg Pro Glu Tyr Thr Ile Val Gln Lys Phe Gly  
 245 250 255

Gly Glu Leu Phe Thr Ala Lys Gln Asp Phe Ser Pro Phe Asn Val Val  
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Ala Trp His Gly Asn Tyr Val Pro Tyr Lys Tyr Asp Leu Lys Lys Phe  
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Cys Pro Tyr Asn Thr Val Leu Leu Asp His Gly Asp Pro Ser Ile Asn  
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Thr Val Leu Thr Ala Pro Thr Asp Lys Pro Gly Val Ala Leu Leu Asp  
 305 310 315 320

Phe Val Ile Phe Pro Pro Arg Trp Leu Val Ala Glu His Thr Phe Arg  
 325 330 335

Pro Pro Tyr Tyr His Arg Asn Cys Met Ser Glu Phe Met Gly Leu Ile  
 340 345 350

Tyr Gly Ala Tyr Glu Ala Lys Ala Asp Gly Phe Leu Pro Gly Gly Ala  
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Glu Ala Thr Ile Ala Arg Val Asn Ala Met Ala Pro Ser Lys Leu Thr  
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Gly Thr Met Ala Phe Met Phe Glu Ser Ala Leu Ile Pro Arg Val Cys  
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His Trp Ala Leu Glu Ser Pro Phe Leu Asp His Asp Tyr Tyr Gln Cys  
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<211> 1446

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<210> 540

<211> 481

<212> PRT

<213> Arabidopsis thaliana

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Lys Ile Phe Gln Lys Pro Ile Glu Arg Phe Lys Asn Leu Asn Pro Ser  
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Phe Glu Ile Asp Ile Gln Ile Phe Asp Phe Pro Cys Val Asp Leu Gly  
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Asp Asp Arg Gln Tyr Leu Thr Leu Lys Phe Phe Lys Ser Thr Arg Phe  
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Phe Lys Asp Gln Leu Glu Lys Leu Leu Glu Thr Thr Arg Pro Asp Cys  
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Cys Ser Glu Tyr Cys Ile Arg Val His Asn Pro Gln Asn Ile Val Ala  
 165 170 175

Ser Arg Tyr Glu Pro Phe Val Ile Pro Asp Leu Pro Gly Asn Ile Val  
 180 185 190

Ile Thr Gln Glu Gln Ile Ala Asp Arg Asp Glu Glu Ser Glu Met Gly  
 195 200 205

Lys Phe Met Ile Glu Val Lys Glu Ser Asp Val Lys Ser Ser Gly Val  
 210 215 220

Ile Val Asn Ser Phe Tyr Glu Leu Glu Pro Asp Tyr Ala Asp Phe Tyr  
 225 230 235 240

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Lys Ser Val Val Leu Lys Arg Ala Trp His Ile Gly Pro Leu Ser Val  
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 275 280 285  
 Ser Val Ile Tyr Ile Ser Phe Gly Ser Val Ala Cys Phe Lys Asn Glu  
 290 295 300  
 Gln Leu Phe Glu Ile Ala Ala Gly Leu Glu Thr Ser Gly Ala Asn Phe  
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 Ile Trp Val Val Arg Lys Asn Ile Gly Ile Glu Lys Glu Glu Trp Leu  
 325 330 335  
 Pro Glu Gly Phe Glu Glu Arg Val Lys Gly Lys Gly Met Ile Ile Arg  
 340 345 350  
 Gly Trp Ala Pro Gln Val Leu Ile Leu Asp His Gln Ala Thr Cys Gly  
 355 360 365  
 Phe Val Thr His Cys Gly Trp Asn Ser Leu Leu Glu Gly Val Ala Ala  
 370 375 380  
 Gly Leu Pro Met Val Thr Trp Pro Val Ala Ala Glu Gln Phe Tyr Asn  
 385 390 395 400  
 Glu Lys Leu Val Thr Gln Val Leu Arg Thr Gly Val Ser Val Gly Ala  
 405 410 415  
 Lys Lys Asn Val Arg Thr Thr Gly Asp Phe Ile Ser Arg Glu Lys Val  
 420 425 430  
 Val Lys Ala Val Arg Glu Val Leu Val Gly Glu Glu Ala Asp Glu Arg  
 435 440 445  
 Arg Glu Arg Ala Lys Lys Leu Ala Glu Met Ala Lys Ala Ala Val Glu  
 450 455 460  
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<211> 1077

<212> DNA

<213> *Arabidopsis thaliana*

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cgaattgggt tgaactaaac ggagatggtt ccatgtgttc ccatattgtt caaagatgag	1020
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<211> 358

<212> PRT

<213> *Arabidopsis thaliana*

<400> 542

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35 40 45  
Lys Glu Lys Lys Lys Gln Lys Thr Lys Lys Gln Asp Gln Ser Ser Glu  
50 55 60  
Leu Val Asn Asp Leu Lys Ile Pro Val Ile Ser Asp Leu Pro Phe Asp  
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Phe Arg Tyr Ser Tyr Ser Glu Thr Asn Pro Glu Ile Glu Pro Ile Gly  
85 90 95  
Phe Arg Glu Pro Lys Arg Phe Ser Pro Phe Gly Pro Gly Arg Leu Asp  
100 105 110  
Arg Lys Trp Thr Gly Thr Thr Ala Leu Ala Ser Pro Glu Ile Asp Gln  
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Ser Gln Trp Val Glu Glu Arg Ala Arg Val Leu Gly Glu Thr Leu Thr  
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Thr Arg Gln Ile Asn Leu Gly Lys Gly Gly Val Thr His Asn Met Ile  
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Asp Asp Ile His Asn His Trp Lys Lys Ala Glu Ala Val Arg Ile Lys  
180 185 190  
Cys Leu Gly Val Pro Thr Leu Asp Met Asp Asn Ile Cys Phe His Leu  
195 200 205  
Glu Glu Lys Ser Gly Gly Lys Ile Val Tyr Arg Asn Ile Asn Ile Leu  
210 215 220  
Val Leu Tyr Arg Gly Arg Asn Tyr Asp Pro Lys Ser Arg Pro Ile Ile  
225 230 235 240  
Pro Leu Met Leu Trp Lys Pro His Pro Pro Ile Tyr Pro Arg Leu Val  
245 250 255



Lys Asn Val Ala Asp Gly Leu Glu Phe Glu Glu Thr Lys Glu Met Arg  
260 265 270

Asn Arg Gly Leu His Ser Pro Ala Leu Met Lys Leu Thr Arg Asn Gly  
275 280 285

Val Tyr Val Asn Val Val Gly Arg Val Arg Glu Glu Phe Glu Thr Glu  
290 295 300

Glu Ile Val Arg Leu Asp Cys Thr His Val Gly Met Ser Asp Cys Lys  
305 310 315 320

Arg Ile Gly Val Lys Leu Lys Glu Met Val Pro Cys Val Pro Ile Leu  
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Glu Glu Leu Val Thr Leu  
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<212> PRT

<213> Arabidopsis thaliana

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35 40 45

Tyr Thr Ala Ala Asn Lys Met Phe Phe Ser Gly Pro Met Val Pro Leu  
50 55 60

Val Pro Asn Ala Ala Arg Val Arg Arg Asn Lys Ser Asp Ala Val Trp  
65 70 75 80

Asp Glu Pro Thr Ser Pro Lys Val Ser Cys Ile Gly Gln Ile Lys Leu  
85 90 95

Gly Lys Ser Lys Cys Pro Thr Gly Lys Lys Asn Lys Ala Pro Ser Ser  
100 105 110

Leu Ile Pro Lys Ile Ser Lys Thr Ser Thr Ser Ser Leu Thr Lys Glu  
115 120 125

Asp Glu Lys Gly Arg Leu Ser Lys Ile Lys Ser Ile Phe Ser Phe Ser  
130 135 140

Pro Ala Ser Gly Arg Asn Thr Ser Arg Lys Ser His Pro Thr Ala Val  
145 150 155 160

Ser Ala Ala Asp Glu His Pro Val Thr Val Val Ser Thr Ala Ala Val  
165 170 175

Pro Ser Leu Gly Gln Met Lys Lys Phe Ala Ser Ser Arg Asp Ala Leu  
180 185 190

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Gly Asp Phe Asp Trp Ala Val Glu Met Lys His Glu Glu Glu Ser Pro  
195 200 205

Ala Asp His His Arg Gly Tyr Tyr Ser Asp Asp Asp Thr Arg Gly Ala  
210 215 220

Tyr Leu Arg Tyr Asp Asp Asp Glu Asp Glu Asp Asp Ile Ile Ile Pro  
225 230 235 240

Phe Ser Ala Pro Leu Gly Leu Lys Pro Lys Lys Glu Val Asn Leu Trp  
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Lys Glu Lys Arg Gly Pro Gln Arg Arg Val Arg Asp Val Ser Ala Gln  
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Asp Val Ala Leu Thr Cys Lys Pro Pro Lys Pro Val Asp Glu Asp Leu  
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<213> Arabidopsis thaliana

<400> 548

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35 40 45

Glu Leu Val Ser Val Lys Val Ile Arg Asn Lys Ile Thr Gly Gln Pro  
50 55 60

Glu Gly Tyr Gly Phe Ile Glu Phe Ile Ser His Ala Ala Ala Glu Arg  
65 70 75 80

Thr Leu Gln Thr Tyr Asn Gly Thr Gln Met Pro Gly Thr Glu Leu Thr  
85 90 95

Phe Arg Leu Asn Trp Ala Ser Phe Gly Ser Gly Gln Lys Val Asp Ala  
Page 847

Gly Pro Asp His Ser Ile Phe Val Gly Asp Leu Ala Pro Asp Val Thr  
 115 120  
 Asp Tyr Leu Leu Gln Glu Thr Phe Arg Val His Tyr Ser Ser Val Arg  
 130 135  
 Gly Ala Lys Val Val Thr Asp Pro Ser Thr Gly Arg Ser Lys Gly Tyr  
 145 150 155 160  
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 Glu Met Asn Gly Leu Tyr Cys Ser Thr Arg Pro Met Arg Ile Ser Ala  
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 Ala Thr Pro Lys Lys Asn Val Gly Val Gln Gln Gln Tyr Val Thr Lys  
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 Ala Val Tyr Pro Val Thr Val Pro Ser Ala Val Ala Ala Pro Val Gln  
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 Ala Tyr Val Ala Pro Pro Glu Ser Asp Val Thr Cys Thr Thr Ile Ser  
 225 230 235 240  
 Val Ala Asn Leu Asp Gln Asn Val Thr Glu Glu Glu Leu Lys Lys Ala  
 245 250 255  
 Phe Ser Gln Leu Gly Glu Val Ile Tyr Val Lys Ile Pro Ala Thr Lys  
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 Gly Tyr Gly Tyr Val Gln Phe Lys Thr Arg Pro Ser Ala Glu Glu Ala  
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 Ser Trp Ser Lys Asn Pro Gly Gln Asp Gly Trp Val Thr Gln Ala Asp  
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 Pro Asn Gln Trp Asn Gly Tyr Tyr Gly Tyr Gly Gln Gly Tyr Asp Ala  
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 Tyr Ala Tyr Gly Ala Thr Gln Asp Pro Ser Val Tyr Ala Tyr Gly Gly  
 340 345 350

Tyr Gly Tyr Pro Gln Tyr Pro Gln Gln Gly Glu Gly Thr Gln Asp Ile  
 355 360 365

Ser Asn Ser Ala Ala Gly Gly Val Ala Gly Ala Glu Gln Glu Leu Tyr  
 370 375 380

Asp Pro Leu Ala Thr Pro Asp Val Asp Lys Leu Asn Ala Ala Tyr Leu  
 385 390 395 400

Ser Val His Ala Ser Ala Ile Leu Gly Arg Pro Met Trp Gln Arg Thr  
 405 410 415

Ser Ser Leu Thr Ser Gln Leu Gly Lys  
 420 425

<210> 549

<211> 2877

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 550

&lt;211&gt; 958

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 550

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20 25 30Asp Arg Phe Arg Arg Arg Ala Arg Ser Pro Ser Pro Pro Gln Thr Ala  
35 40 45Ala Ala Ser Ser Ala Gly Ala Ser Ser Pro Ala Val Leu Val Asn Ala  
50 55 60Gly Ser Val Asp Trp Thr Gly His Gly Leu Ala Leu Ser Val Arg Ser  
65 70 75 80Cys Arg Thr Trp Asp Arg Gly Asp Leu Leu Arg Arg Leu Ala Thr Phe  
85 90 95Lys Pro Ser Asn Trp Leu Gly Lys Pro Lys Thr Ala Ser Ser Leu Ala  
100 105 110Cys Ala Gln Lys Gly Trp Val Ser Val Asp Leu Asp Lys Leu Gln Cys  
115 120 125Glu Tyr Cys Gly Ser Ile Leu Gln Tyr Ser Pro Pro Gln Asp Ser Leu  
130 135 140Asn Pro Pro Glu Ala Asp Thr Thr Gly Glu Lys Phe Ser Lys Gln Leu  
145 150 155 160Asp Asp Ala His Glu Ser Ser Cys Pro Trp Val Gly Lys Ser Cys Ser  
165 170 175Glu Ser Leu Val Gln Phe Pro Pro Thr Pro Pro Ser Ala Leu Ile Gly  
180 185 190Gly Tyr Lys Asp Arg Cys Asp Gly Leu Leu Gln Phe Tyr Ser Leu Pro  
Page 851

195 047-E2F-PCT.ST25.txt 205  
200

Ile Val Ser Pro Ser Ala Ile Asp Gln Met Arg Ala Ser Arg Arg Pro  
210 215 220

Gln Ile Asp Arg Leu Leu Ala His Ala Asn Asp Asp Leu Ser Phe Arg  
225 230 235 240

Met Asp Asn Ile Ser Ala Ala Glu Thr Tyr Lys Glu Glu Ala Phe Ser  
245 250 255

Asn Tyr Ser Arg Ala Gln Lys Leu Ile Ser Leu Cys Gly Trp Glu Pro  
260 265 270

Arg Trp Leu Pro Asn Ile Gln Asp Cys Glu Glu His Ser Ala Gln Ser  
275 280 285

Ala Arg Asn Gly Cys Pro Ser Gly Pro Ala Arg Asn Gln Ser Arg Leu  
290 295 300

Gln Asp Pro Gly Pro Ser Arg Lys Gln Phe Ser Ala Ser Ser Arg Lys  
305 310 315 320

Ala Ser Gly Asn Tyr Glu Val Leu Gly Pro Glu Tyr Lys Ser Glu Ser  
325 330 335

Arg Leu Pro Leu Leu Asp Cys Ser Leu Cys Gly Val Thr Val Arg Ile  
340 345 350

Cys Asp Phe Met Thr Thr Ser Arg Pro Val Pro Phe Ala Ala Ile Asn  
355 360 365

Ala Asn Leu Pro Glu Thr Ser Lys Lys Met Gly Val Thr Arg Gly Thr  
370 375 380

Ser Ala Thr Ser Gly Ile Asn Gly Trp Phe Ala Asn Glu Gly Met Gly  
385 390 395 400

Gln Gln Gln Asn Glu Asp Val Asp Glu Ala Glu Thr Ser Val Lys Arg  
405 410 415

Arg Leu Val Ser Asn Val Gly Leu Ser Phe Tyr Gln Asn Ala Ala Gly  
420 425 430

Ala Ser Ser Ser Ala Gln Leu Asn Met Ser Val Thr Arg Asp Asn Tyr  
435 440 445

Gln Phe Ser Asp Arg Gly Lys Glu Val Leu Trp Arg Gln Pro Ser Gly  
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 Ser Glu Val Gly Asp Arg Ala Ala Ser Tyr Glu Ser Arg Gly Pro Ser  
 465 470 475 480  
 Thr Arg Lys Arg Ser Leu Asp Asp Gly Gly Ser Thr Val Asp Arg Pro  
 485 490 495  
 Tyr Leu Arg Ile Gln Arg Ala Asp Ser Val Glu Gly Thr Val Val Asp  
 500 505 510  
 Arg Asp Gly Asp Glu Val Asn Asp Asp Ser Ala Gly Pro Ser Lys Arg  
 515 520 525  
 Thr Arg Gly Ser Asp Ala His Glu Ala Tyr Pro Phe Leu Tyr Gly Arg  
 530 535 540  
 Asp Leu Ser Val Gly Gly Pro Ser His Ser Leu Asp Ala Glu Asn Glu  
 545 550 555 560  
 Arg Glu Val Asn Arg Ser Asp Pro Phe Ser Glu Gly Asn Glu Gln Val  
 565 570 575  
 Met Ala Phe Pro Gly Ala Arg Asp Ser Thr Arg Ala Ser Ser Val Ile  
 580 585 590  
 Ala Met Asp Thr Ile Cys His Ser Ala Asn Asp Asp Ser Met Glu Ser  
 595 600 605  
 Val Glu Asn His Pro Gly Asp Phe Asp Asp Ile Asn Tyr Pro Ser Val  
 610 615 620  
 Ala Thr Ala Gln Ser Ala Asp Phe Asn Asp Pro Ser Glu Leu Asn Phe  
 625 630 635 640  
 Ser Asn Gln Ala Gln Gln Ser Ala Cys Phe Gln Pro Ala Pro Val Arg  
 645 650 655  
 Phe Asn Ala Glu Gln Gly Ile Ser Ser Ile Asn Asp Gly Glu Glu Val  
 660 665 670  
 Leu Asn Thr Glu Thr Val Thr Ala Gln Gly Arg Asp Gly Pro Ser Leu  
 675 680 685  
 Gly Val Ser Gly Gly Ser Val Gly Met Gly Ala Ser His Glu Ala Glu  
 690 695 700

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Ile His Gly Ala Asp Val Ser Val His Arg Gly Asp Ser Val Val Gly  
705 710 715 720

Asp Met Glu Pro Val Ala Glu Val Ile Glu Asn Leu Gly Gln Ser Gly  
725 730 735

Glu Phe Ala Pro Asp Gln Gly Leu Thr Asp Asp Phe Val Pro Ala Glu  
740 745 750

Met Asp Arg Glu Gly Arg Leu Gly Asp Ser Gln Asp Arg Val Ser Gln  
755 760 765

Ser Val Val Arg Ala Asp Ser Gly Ser Lys Ile Val Asp Ser Leu Lys  
770 775 780

Ala Glu Ser Val Glu Ser Gly Glu Lys Met Ser Asn Ile Asn Val Leu  
785 790 795 800

Ile Asn Asp Asp Ser Val His Pro Ser Leu Ser Cys Asn Ala Ile Val  
805 810 815

Cys Ser Gly Tyr Glu Ala Ser Lys Glu Glu Val Thr Gln Thr Trp Glu  
820 825 830

Ser Pro Leu Asn Ala Gly Phe Ala Leu Pro Gly Ser Ser Tyr Thr Ala  
835 840 845

Asn Asp Gln Gly Pro Gln Asn Gly Asp Ser Asn Asp Asp Ile Val Glu  
850 855 860

Phe Asp Pro Ile Lys Tyr His Asn Cys Tyr Cys Pro Trp Val Asn Glu  
865 870 875 880

Asn Val Ala Ala Ala Gly Cys Ser Ser Asn Ser Ser Gly Ser Ser Gly  
885 890 895

Phe Ala Glu Ala Val Cys Gly Trp Gln Leu Thr Leu Asp Ala Leu Asp  
900 905 910

Ser Phe Gln Ser Leu Glu Asn Pro Gln Asn Gln Thr Met Glu Ser Glu  
915 920 925

Ser Ala Ala Ser Leu Cys Lys Asp Asp His Arg Thr Pro Ser Gln Lys  
930 935 940

Leu Leu Lys Arg His Ser Phe Ile Ser Ser His Gly Lys Lys  
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&lt;210&gt; 551

&lt;211&gt; 846

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 551

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aagatgtttt ggcaaaagcc atgttcattg gctctgccta aagactctcc tctcagaatt   240
gatgaaccag actatgtagg gattcgtcgt ttcatactaa agatgatgat gttctatagc   300
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&lt;210&gt; 552

&lt;211&gt; 281

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 552

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Ser Leu Thr  Thr Asn Gly Ser Met  Lys Asn Leu Ser Phe Phe Ser Arg
          20          25          30

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047-E2F-PCT.ST25.txt

Tyr Gly Tyr Ala Thr Val Ala Pro Ala Ala Ala Asp Pro Pro Ser Gln  
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 50 55 60  
 Ser Lys Pro Cys Ser Leu Ala Leu Pro Lys Asp Ser Pro Leu Arg Ile  
 65 70 75 80  
 Asp Glu Pro Asp Tyr Val Gly Ile Arg Arg Phe Ile Leu Lys Met Met  
 85 90 95  
 Met Phe Tyr Ser Lys Gln Ser Met Ser Ile Arg Gly Ala Asn Val Ile  
 100 105 110  
 Tyr Lys Arg Ile Ile Ala Gln Val Asp Lys Pro Ala Ile Tyr Asp Val  
 115 120 125  
 Phe Asn Leu Glu Lys Thr Phe Lys Ile Thr Tyr Ser Leu Leu Val Leu  
 130 135 140  
 His Met Trp Leu Val Leu Arg Arg Leu Lys Glu Asp Gly Gln Glu Gly  
 145 150 155 160  
 Val Asp Leu Gly Gln Tyr Val Tyr Glu Ile Tyr Asn His Asp Val Glu  
 165 170 175  
 Leu Arg Val Ser Lys Ala Gly Val Asn Leu Leu Leu Ala Lys Trp Met  
 180 185 190  
 Lys Glu Leu Glu Arg Ile Phe Tyr Gly Asn Val Val Ala Tyr Asp Ala  
 195 200 205  
 Ala Leu Leu Pro Glu Ala Lys Pro Asn Asp Leu Gln Ile Lys Leu Trp  
 210 215 220  
 Arg Asn Val Phe Ser Asp Asp Gly Thr Thr Thr Pro Asp Asn Thr Asp  
 225 230 235 240  
 Leu Lys Thr Ala Gln Ala Met Ala Arg Tyr Val Arg Arg Glu Leu Gly  
 245 250 255  
 Ser Leu Ser Leu Thr Asp Lys Glu Ser Ile Phe Ser Gly Asn Phe Ser  
 260 265 270  
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047-E2F-PCT.ST25.txt

<210> 553

<211> 513

<212> DNA

<213> *Arabidopsis thaliana*

<400> 553

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gaaacccgct cacctttctc cgactccta attagagaga tcctaccggt tatcaaattc    240
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<210> 554

<211> 170

<212> PRT

<213> *Arabidopsis thaliana*

<400> 554

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          20          25          30
Ile Phe Arg Phe Leu Gly Leu Ser Asp Phe Leu Glu Met Asp Gln Thr
          35          40          45
Trp Pro Asp Tyr Thr Ser Tyr Pro Thr Arg Ile Pro Glu Thr Arg Ser
          50          55          60
Pro Phe Ser Ala Leu Leu Ile Arg Glu Ile Leu Pro Val Ile Lys Phe
65          70          75          80
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Glu Glu Leu Thr Asn Ser Gly Glu Asp Leu Pro Glu Asn Cys Ala Val  
85 90  
Cys Leu Tyr Glu Phe Glu Gly Glu Gln Glu Ile Arg Trp Leu Arg Asn  
100 105 110  
Cys Arg His Ile Phe His Arg Ser Cys Leu Asp Arg Trp Met Asp His  
115 120 125  
Asp Gln Lys Thr Cys Pro Leu Cys Arg Thr Pro Phe Val Pro Asp Glu  
130 135 140  
Met Gln Glu Glu Phe Asn Gln Arg Leu Trp Ala Ala Ser Gly Val His  
145 150 155 160  
Asp Phe His Cys Pro Val Thr Glu Leu Leu  
165 170

<210> 555

<211> 1443

<212> DNA

<213> Arabidopsis thaliana

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047-E2F-PCT.ST25.txt

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 tga 1443

<210> 556

<211> 480

<212> PRT

<213> Arabidopsis thaliana

<400> 556

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Arg Tyr Ile Gly Ser Gly Ala Gly Leu Gly Ser Glu Ala Leu Met Glu  
 35 40 45

Leu Glu Thr Lys Arg Ile Leu Leu Glu Ile Phe Lys Glu Lys Gln Gln  
 50 55 60

Lys Ser Gln Glu Ala Gly Thr Ile Pro Ser Phe Tyr Lys Lys Lys Pro  
 65 70 75 80

Glu Glu Gly Ser Ile Ser Gln Arg Val Gln Lys Leu Ala Lys Tyr Arg  
 85 90 95

Phe Leu Lys Lys Gln Ser Asp Leu Leu Asn Ala Asp Asp Leu Ala  
 100 105 110

047-E2F-PCT.ST25.txt

Ala Met Trp Val Cys Leu Arg Glu Asn Cys Val Ile Asp Asp Ala Thr  
115 120 125

Gly Ala Glu Lys Met Asn Tyr Glu Asp Phe Cys His Ile Ala Ser Val  
130 135 140

Cys Thr Glu Gln Ile Gly Pro Lys Cys Arg Arg Phe Phe Ser Pro Ser  
145 150 155 160

Asn Phe Met Lys Phe Glu Lys Asp Glu Ala Gly Arg Ile Ala Ile Leu  
165 170 175

Pro Phe Tyr Leu Tyr Val Met Arg Thr Val Ser Leu Thr Gln Ala Arg  
180 185 190

Ile Asp Met Ser Glu Leu Asp Glu Asp Ser Asp Gly Phe Leu His Ser  
195 200 205

Asp Glu Met Glu Ser Tyr Ile Gly Gly Leu Ile Pro Asn Leu Ala Gln  
210 215 220

Leu Arg Asp Met Pro Pro Ala Phe Asn Gln Met Tyr Cys Arg Ile Ala  
225 230 235 240

Ser Gln Lys Phe Phe Phe Phe Cys Asp Pro His Arg Arg Gly Arg Ala  
245 250 255

Cys Ile Lys Lys Ile Leu Leu Ser Asn Cys Leu Gln Glu Leu Met Glu  
260 265 270

Leu His Gln Glu Ser Glu Glu Glu Val Thr Asp Thr Glu Gln Ala Glu  
275 280 285

Asn Trp Phe Ser Leu Thr Ser Ala Gln Arg Ile Cys Asp Met Phe Leu  
290 295 300

Ala Leu Asp Lys Asp Met Ser Gly Ser Leu Cys Lys Gln Glu Leu Lys  
305 310 315 320

Glu Tyr Ala Asp Gly Thr Leu Thr Glu Ile Phe Ile Glu Arg Val Phe  
325 330 335

Asp Glu His Val Arg Arg Gly Lys Ile Val Ala Gly Asn Ser Arg Glu  
340 345 350

Met Asp Phe Asp Ser Phe Leu Asp Phe Val Leu Ala Leu Glu Asn Lys  
355 360 365

Asp Thr Pro Glu Gly Leu Thr Tyr Leu Phe Arg Cys Leu Asp Leu Gln  
 370 375 380

Gly Arg Gly Phe Leu Thr Thr Ala Asp Ile His Ser Leu Phe Arg Asp  
 385 390 395 400

Val His Gln Lys Trp Ile Glu Gly Gly Asn Tyr Glu Leu Cys Ile Glu  
 405 410 415

Asp Val Arg Asp Glu Ile Trp Asp Met Val Lys Pro Ser Asp Pro Leu  
 420 425 430

Lys Ile Thr Leu Gly Asp Leu Leu Gly Cys Lys Gln Gly Gly Thr Val  
 435 440 445

Ala Ser Met Leu Ile Asp Val Arg Gly Phe Trp Ala His Asp Asn Arg  
 450 455 460

Glu Asn Leu Leu Gln Glu Glu Glu Glu Pro Pro Glu Glu Glu Ser Gln  
 465 470 475 480

<210> 557

<211> 939

<212> DNA

<213> Arabidopsis thaliana

<400> 557  
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 aagggtgtct ttgctgttgc acatgaaggg tcacgtttgg agattcctga tggtcactc 840  
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&lt;210&gt; 558

&lt;211&gt; 312

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 558

Met Ser Leu Pro Ser Ser Pro His Ala Tyr Arg Cys Gln Thr Phe Gly  
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Arg Arg Gly Pro Ser Glu Phe Ala Val Lys Asp Thr Trp Asn Lys Val  
 20 25 30

Val Glu Ser Ser Thr Leu Gln Asn Gln Pro Leu Leu Pro Tyr Gln Glu  
 35 40 45

Trp Asp Ile Asp Phe Ser Glu Leu Thr Val Gly Thr Arg Val Gly Ile  
 50 55 60

Gly Phe Phe Gly Glu Val Phe Arg Gly Val Trp Asn Gly Thr Asp Val  
 65 70 75 80

Ala Ile Lys Leu Phe Leu Glu Gln Asp Leu Thr Ala Glu Asn Met Glu  
 85 90 95

Asp Phe Cys Asn Glu Ile Ser Ile Leu Ser Arg Val Arg His Pro Asn  
 100 105 110

Val Val Leu Phe Leu Gly Ala Cys Thr Lys Pro Pro Arg Leu Ser Met  
 115 120 125

Ile Thr Glu Tyr Met Glu Leu Gly Ser Leu Tyr Tyr Leu Ile His Met  
 130 135 140

Ser Gly Gln Lys Lys Lys Leu Ser Trp His Arg Arg Leu Arg Met Leu  
 145 150 155 160

047-E2F-PCT.ST25.txt

Arg Asp Ile Cys Arg Gly Leu Met Cys Ile His Arg Met Lys Ile Val  
165 170 175

His Arg Asp Leu Lys Ser Ala Asn Cys Leu Val Asp Lys His Trp Thr  
180 185 190

Val Lys Ile Cys Asp Phe Gly Leu Ser Arg Ile Met Thr Asp Glu Asn  
195 200 205

Met Lys Asp Thr Ser Ser Ala Gly Thr Pro Glu Trp Met Ala Pro Glu  
210 215 220

Leu Ile Arg Asn Arg Pro Phe Thr Glu Lys Cys Asp Ile Phe Ser Leu  
225 230 235 240

Gly Val Ile Met Trp Glu Leu Ser Thr Leu Arg Lys Pro Trp Glu Gly  
245 250 255

Val Pro Pro Glu Lys Val Val Phe Ala Val Ala His Glu Gly Ser Arg  
260 265 270

Leu Glu Ile Pro Asp Gly Pro Leu Ser Lys Leu Ile Ala Asp Cys Trp  
275 280 285

Ala Glu Pro Glu Glu Arg Pro Asn Cys Glu Glu Ile Leu Arg Gly Leu  
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Leu Asp Cys Glu Tyr Thr Leu Cys  
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<210> 559

<211> 1458

<212> DNA

<213> Arabidopsis thaliana

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gaatccggat ccgactccga gtcttcttct tccattactc taaacctcga ccacatcgat 240  
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gcgccacgac ccggtggatt cagcagctca gtcgtctctg gtctctctca aggaagcgg 420  
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<210> 560

<211> 485

<212> PRT

<213> *Arabidopsis thaliana*

<400> 560

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20 25 30

Pro Asn Ser His Ser Leu Pro Cys Ala Ser Pro Val Ser Phe Gln Pro  
35 40 45

047-E2F-PCT.ST25.txt

Asp Ser Asp Ser Glu Ser Leu Leu Glu Ser Glu Phe Glu Ser Gly Ser  
 50 55 60  
 Asp Ser Glu Ser Ser Ser Ser Ile Thr Leu Asn Leu Asp His Ile Asp  
 65 70 75 80  
 Ala Leu Ser Ser Asn Lys Thr Pro Asp Glu Leu Phe Ser Ser Arg Leu  
 85 90 95  
 Gln Arg Asp Ser Arg Arg Val Lys Ser Ile Ala Thr Leu Ala Ala Gln  
 100 105 110  
 Ile Pro Gly Arg Asn Val Thr His Ala Pro Arg Pro Gly Gly Phe Ser  
 115 120 125  
 Ser Ser Val Val Ser Gly Leu Ser Gln Gly Ser Gly Glu Tyr Phe Thr  
 130 135 140  
 Arg Leu Gly Val Gly Thr Pro Ala Arg Tyr Val Tyr Met Val Leu Asp  
 145 150 155 160  
 Thr Gly Ser Asp Ile Val Trp Leu Gln Cys Ala Pro Cys Arg Arg Cys  
 165 170 175  
 Tyr Ser Gln Ser Asp Pro Ile Phe Asp Pro Arg Lys Ser Lys Thr Tyr  
 180 185 190  
 Ala Thr Ile Pro Cys Ser Ser Pro His Cys Arg Arg Leu Asp Ser Ala  
 195 200 205  
 Gly Cys Asn Thr Arg Arg Lys Thr Cys Leu Tyr Gln Val Ser Tyr Gly  
 210 215 220  
 Asp Gly Ser Phe Thr Val Gly Asp Phe Ser Thr Glu Thr Leu Thr Phe  
 225 230 235 240  
 Arg Arg Asn Arg Val Lys Gly Val Ala Leu Gly Cys Gly His Asp Asn  
 245 250 255  
 Glu Gly Leu Phe Val Gly Ala Ala Gly Leu Leu Gly Leu Gly Lys Gly  
 260 265 270  
 Lys Leu Ser Phe Pro Gly Gln Thr Gly His Arg Phe Asn Gln Lys Phe  
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 Ser Tyr Cys Leu Val Asp Arg Ser Ala Ser Ser Lys Pro Ser Ser Val  
 290 295 300

047-E2F-PCT.ST25.txt

Val Phe Gly Asn Ala Ala Val Ser Arg Ile Ala Arg Phe Thr Pro Leu  
305 310 315 320

Leu Ser Asn Pro Lys Leu Asp Thr Phe Tyr Tyr Val Gly Leu Leu Gly  
325 330 335

Ile Ser Val Gly Gly Thr Arg Val Pro Gly Val Thr Ala Ser Leu Phe  
340 345 350

Lys Leu Asp Gln Ile Gly Asn Gly Gly Val Ile Ile Asp Ser Gly Thr  
355 360 365

Ser Val Thr Arg Leu Ile Arg Pro Ala Tyr Ile Ala Met Arg Asp Ala  
370 375 380

Phe Arg Val Gly Ala Lys Thr Leu Lys Arg Ala Pro Asp Phe Ser Leu  
385 390 395 400

Phe Asp Thr Cys Phe Asp Leu Ser Asn Met Asn Glu Val Lys Val Pro  
405 410 415

Thr Val Val Leu His Phe Arg Gly Ala Asp Val Ser Leu Pro Ala Thr  
420 425 430

Asn Tyr Leu Ile Pro Val Asp Thr Asn Gly Lys Phe Cys Phe Ala Phe  
435 440 445

Ala Gly Thr Met Gly Gly Leu Ser Ile Ile Gly Asn Ile Gln Gln Gln  
450 455 460

Gly Phe Arg Val Val Tyr Asp Leu Ala Ser Ser Arg Val Gly Phe Ala  
465 470 475 480

Pro Gly Gly Cys Ala  
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<210> 561

<211> 966

<212> DNA

<213> Arabidopsis thaliana

<400> 561  
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atctcaatca agaaacgata tccaagaacc ttctacctca taacctctc cttcatcttc 120  
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<210> 562

<211> 321

<212> PRT

<213> Arabidopsis thaliana

<400> 562

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Leu Gln Glu Ser Ile Ser Ile Lys Lys Arg Ser Pro Arg Thr Phe Tyr
20 25 30
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Leu Ile Thr Leu Ser Phe Ile Phe Pro Leu Ser Phe Ala Ile Leu Ala
35 40 45
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His Ser Leu Phe Thr Gln Pro Ile Leu Ala Lys Leu Asp Lys Ser Asp
50 55 60
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Pro Pro Asn Ser Asp Arg Ser Arg His Asp Trp Thr Val Leu Leu Ile
65 70 75 80
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047-E2F-PCT.ST25.txt

Phe Gln Phe Ser Tyr Leu Ile Phe Leu Phe Ala Phe Ser Leu Ser  
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 Thr Ala Ala Val Val Phe Thr Val Ala Ser Leu Tyr Thr Gly Lys Pro  
 100 105 110  
 Val Ser Phe Ser Ser Thr Leu Ser Ala Ile Pro Lys Val Phe Lys Arg  
 115 120 125  
 Leu Phe Ile Thr Phe Leu Trp Val Ala Leu Leu Met Phe Ala Tyr Asn  
 130 135 140  
 Ala Val Phe Phe Val Phe Leu Val Met Leu Leu Val Ala Leu Asp Leu  
 145 150 155  
 Asn Ser Leu Gly Leu Ala Ile Val Ala Gly Val Ile Ile Ser Val Leu  
 165 170 175  
 Tyr Phe Gly Val His Val Tyr Phe Thr Ala Leu Trp His Leu Gly Ser  
 180 185 190  
 Val Ile Ser Val Leu Glu Pro Val Tyr Gly Ile Ala Ala Met Arg Lys  
 195 200 205  
 Ala Tyr Glu Leu Leu Lys Gly Lys Thr Lys Met Ala Met Gly Leu Ile  
 210 215 220  
 Phe Val Tyr Leu Phe Leu Cys Gly Leu Ile Gly Val Val Phe Gly Ala  
 225 230 235 240  
 Val Val Val His Gly Gly Gly Lys Tyr Gly Thr Phe Thr Arg Thr Leu  
 245 250 255  
 Val Gly Gly Leu Leu Val Gly Val Leu Val Met Val Asn Leu Val Gly  
 260 265 270  
 Leu Leu Val Gln Ser Val Phe Tyr Tyr Val Cys Lys Ser Tyr His His  
 275 280 285  
 Gln Thr Ile Asp Lys Thr Ala Leu Tyr Asp Gln Leu Gly Gly Tyr Leu  
 290 295 300  
 Gly Asp Tyr Val Pro Leu Lys Ser Asn Ile Gln Leu Glu Asp Leu Asp  
 305 310 315 320  
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&lt;210&gt; 563

&lt;211&gt; 2358

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 563

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<210> 564

<211> 785

<212> PRT

<213> *Arabidopsis thaliana*

<400> 564

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 20 25 30

Glu Glu Arg Glu Leu Gln Ala Glu Gln Asn Asn Ser Asn Leu Ala Pro  
 35 40 45

Pro Ala Ala Val Ala Thr His Thr Arg Thr Ile Gly Ile Ile His Pro  
 50 55 60

Pro Pro Asp Ile Arg Thr Ile Val Glu Lys Thr Ala Gln Phe Val Ser  
 65 70 75 80

Lys Asn Gly Leu Glu<sub>85</sub> Phe Glu Lys Arg Ile<sub>90</sub> Ile Val Ser Asn Glu<sub>95</sub> Lys  
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 Tyr Gln His<sub>115</sub> Lys Leu Thr Glu Tyr<sub>120</sub> Arg Ala Gln Asn Lys<sub>125</sub> Asp Gly Ala  
 Gln Gly Thr<sub>130</sub> Asp Asp Ser<sub>135</sub> Asp Gly Thr Thr Asp Pro<sub>140</sub> Gln Leu Asp Thr  
 Gly Ala Ala Asp Glu<sub>145</sub> Ser<sub>150</sub> Glu Ala Gly Asp Thr<sub>155</sub> Gln Pro Asp Leu Gln<sub>160</sub>  
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 Lys Tyr Thr Val<sub>180</sub> Arg Leu Pro Glu Gly<sub>185</sub> Ile Thr Gly Glu Glu<sub>190</sub> Leu Asp  
 Ile Ile Lys<sub>195</sub> Leu Thr Ala Gln Phe<sub>200</sub> Val Ala Arg Asn Gly<sub>205</sub> Lys Ser Phe  
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 Met Lys Pro Thr His<sub>225</sub> Ser<sub>230</sub> Met Phe Thr Phe<sub>235</sub> Thr Ser Leu Val Asp<sub>240</sub>  
 Ala Tyr Ser Glu Val<sub>245</sub> Leu Met Pro Pro Lys<sub>250</sub> Asp Leu Lys Glu Lys<sub>255</sub> Leu  
 Arg Lys Ser Ala<sub>260</sub> Ala Asp Leu Thr Thr Val<sub>265</sub> Leu Glu Arg Cys<sub>270</sub> Leu His  
 Arg Leu Glu<sub>275</sub> Trp Asp Arg Ser Gln<sub>280</sub> Glu Gln Gln Lys Lys<sub>285</sub> Lys Glu Glu  
 Asp Glu Lys Glu Leu Glu Arg<sub>295</sub> Val Gln Met Ala Met<sub>300</sub> Ile Asp Trp His  
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Ala Ser Ala Met Glu Glu Asp Glu Ile Val Glu Pro Gly Lys Glu Val  
340 345 350

Glu Met Glu Met Asp Glu Glu Glu Val Lys Leu Val Ala Glu Gly Met  
355 360 365

Arg Ala Ala Asn Leu Glu Glu Asn Val Lys Ile Glu Asn Val His Asp  
370 375 380

Glu Glu Ala Pro Met Arg Ile Val Lys Asn Trp Lys Arg Pro Glu Asp  
385 390 395 400

Arg Ile Pro Thr Glu Arg Asp Pro Thr Lys Val Val Ile Ser Pro Ile  
405 410 415

Thr Gly Glu Leu Ile Pro Ile Asn Glu Met Ser Glu His Met Arg Ile  
420 425 430

Ser Leu Ile Asp Pro Lys Phe Lys Glu Gln Lys Asp Arg Met Phe Ala  
435 440 445

Lys Ile Arg Glu Thr Thr Leu Ala Gln Asp Asp Glu Ile Ala Lys Asn  
450 455 460

Ile Val Gly Leu Ala Arg Leu Arg Pro Asp Ile Phe Gly Thr Thr Glu  
465 470 475 480

Glu Glu Val Ser Asn Ala Val Lys Ala Glu Ile Glu Lys Lys Lys Asp  
485 490 495

Glu Gln Pro Lys Gln Val Ile Trp Asp Gly His Thr Gly Ser Ile Gly  
500 505 510

Arg Thr Ala Asn Gln Ala Leu Ser Gln Asn Ala Asn Gly Glu Glu Gln  
515 520 525

Gly Asp Gly Val Tyr Gly Asp Pro Asn Ser Phe Pro Gly Pro Ala Ala  
530 535 540

Leu Pro Pro Pro Arg Pro Gly Val Pro Ile Val Arg Pro Leu Pro Pro  
545 550 555 560

Pro Pro Asn Leu Ala Leu Asn Leu Pro Arg Pro Pro Pro Ser Ala Gln  
565 570 575

Tyr Pro Gly Ala Pro Arg Pro Leu Gly Val Pro Met Met Gln Pro Met  
580 585 590

047-E2F-PCT.ST25.txt

His Gln Gln His Gln Leu Thr Met Pro Gly Pro Pro Gly His Pro Gln  
595 600 605

Met Met Met Asn Arg Pro Pro Gln Met Gln Pro Gly Met His Val Pro  
610 615 620

Pro Pro Pro Gly Ser Gln Phe Ala His His Met Gln Ile Pro Arg Pro  
625 630 635 640

Tyr Gly Gln Leu Pro Pro Ser Ala Met Gly Met Met Gln Pro Pro Pro  
645 650 655

Met Pro Gly Met Ala Pro Pro Pro Pro Pro Glu Glu Ala Pro Pro Pro  
660 665 670

Leu Pro Glu Glu Pro Glu Ala Lys Arg Gln Lys Phe Asp Glu Ser Ala  
675 680 685

Leu Val Pro Glu Asp Gln Phe Leu Ala Gln His Pro Gly Pro Ala Thr  
690 695 700

Ile Arg Val Ser Lys Pro Asn Glu Asn Asp Gly Gln Phe Met Glu Ile  
705 710 715 720

Thr Val Gln Ser Leu Ser Glu Asn Val Gly Ser Leu Lys Glu Lys Ile  
725 730 735

Ala Gly Glu Ile Gln Ile Pro Ala Asn Lys Gln Lys Leu Ser Gly Lys  
740 745 750

Ala Gly Phe Leu Lys Asp Asn Met Ser Leu Ala His Tyr Asn Val Gly  
755 760 765

Ala Gly Glu Ile Leu Thr Leu Ser Leu Arg Glu Arg Gly Gly Arg Lys  
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Arg  
785

<210> 565

<211> 1176

<212> DNA

<213> Arabidopsis thaliana

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 aatcaaacag aacctgctct gtctcctggc cagagcaata atcagttagc gtttgactca 720  
 tcgacggcaa gctgggaaca gagtcacag tcaccggaat ttggaagat acagagacta 780  
 gtgtcatgga acaacgtcgg agcagctgaa tccgccggaa gtaccggagg atttgtgttt 840  
 gcttctccgt cgtcgttgca tccagtttat agccaaagtc agcttttatc acagaggggt 900  
 ccccttcagt ccattaacac acctatgatt cgtgcttggt ttgatctca ccatcatcat 960  
 catcatcatc agcagtcctat gaccactgac gatctccacc atcatcatcc ctaccatatt 1020  
 cctccgggga ttcaccaatc tgctattcca ggcattgcat ttgcttcaag tggtgaaattc 1080  
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<210> 566

<211> 391

<212> PRT

<213> Arabidopsis thaliana

<400> 566

Met Ala Pro Asp Asn Asp His Phe Leu Asp Ser Pro Ser Pro Pro Leu  
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Leu Glu Met Arg His His Gln Ser Ala Thr Glu Asn Gly Gly Gly Cys  
 20 25 30



Gly Glu Ile Val Glu Val Gln Gly Gly His Ile Val Arg Ser Thr Gly  
 35 40 45  
 Arg Lys Asp Arg His Ser Lys Val Cys Thr Ala Lys Gly Pro Arg Asp  
 50 55 60  
 Arg Arg Val Arg Leu Ser Ala Pro Thr Ala Ile Gln Phe Tyr Asp Val  
 65 70 75 80  
 Gln Asp Arg Leu Gly Phe Asp Arg Pro Ser Lys Ala Val Asp Trp Leu  
 85 90 95  
 Ile Thr Lys Ala Lys Ser Ala Ile Asp Asp Leu Ala Gln Leu Pro Pro  
 100 105 110  
 Trp Asn Pro Ala Asp Thr Leu Arg Gln His Ala Ala Ala Ala Asn  
 115 120 125  
 Ala Lys Pro Arg Lys Thr Lys Thr Leu Ile Ser Pro Pro Pro Gln  
 130 135 140  
 Pro Glu Glu Thr Glu His His Arg Ile Gly Glu Glu Glu Asp Asn Glu  
 145 150 155 160  
 Ser Ser Phe Leu Pro Ala Ser Met Asp Ser Asp Ser Ile Ala Asp Thr  
 165 170 175  
 Ile Lys Ser Phe Phe Pro Val Ala Ser Thr Gln Gln Ser Tyr His His  
 180 185 190  
 Gln Pro Pro Ser Arg Gly Asn Thr Gln Asn Gln Asp Leu Leu Arg Leu  
 195 200 205  
 Ser Leu Gln Ser Phe Gln Asn Gly Pro Pro Phe Pro Asn Gln Thr Glu  
 210 215 220  
 Pro Ala Leu Phe Ser Gly Gln Ser Asn Asn Gln Leu Ala Phe Asp Ser  
 225 230 235 240  
 Ser Thr Ala Ser Trp Glu Gln Ser His Gln Ser Pro Glu Phe Gly Lys  
 245 250 255  
 Ile Gln Arg Leu Val Ser Trp Asn Asn Val Gly Ala Ala Glu Ser Ala  
 260 265 270  
 Gly Ser Thr Gly Gly Phe Val Phe Ala Ser Pro Ser Ser Leu His Pro  
 275 280 285

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Val Tyr Ser Gln Ser Gln Leu Leu Ser Gln Arg Gly Pro Leu Gln Ser  
 290 295 300  
 Ile Asn Thr Pro Met Ile Arg Ala Trp Phe Asp Pro His His His His  
 305 310 315 320  
 His His His Gln Gln Ser Met Thr Thr Asp Asp Leu His His His His  
 325 330 335  
 Pro Tyr His Ile Pro Pro Gly Ile His Gln Ser Ala Ile Pro Gly Ile  
 340 345 350  
 Ala Phe Ala Ser Ser Gly Glu Phe Ser Gly Phe Arg Ile Pro Ala Arg  
 355 360 365  
 Phe Gln Gly Glu Gln Glu Glu His Gly Gly Asp Asn Lys Pro Ser Ser  
 370 375 380  
 Ala Ser Ser Asp Ser Arg His  
 385 390

<210> 567

<211> 1686

<212> DNA

<213> Arabidopsis thaliana

<400> 567  
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 ttcttcgccg gaacagctcg aatcctcata gtcgtcttca ttatccctcc tttcttctcc 180  
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 gatcgaagaa gtcgtgtatc taacagtggg acaacgccgc gttattggaa cgatgatcgc 420  
 ggtggtggcg gcggtgatca aacggtgtac aagagggtta gtagattacg aagtgttagc 480  
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 gatacacgtg taagtcaatg ccgttatgaa gatgtagatc cgatctatcc aaatcaaagt 600  
 tacagaaact ggcgatgagga aggtaaacca ccgccggaag atgtagatca aacagaggac 660  
 ggtgataatg gagaagggaag taagggtccgt aacggcgggt cggaactga gaaagttgag 720

047-E2F-PCT.ST25.txt

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 aagactaata gagtgtacca agatgtttct ccacaggaag agaagaaaga aagagatgat 900  
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 ggaagcgaat caccactaat gccgatccg ccggcgctc ctctccgcc gtttaaaatg 1380  
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 gtatag 1686

<210> 568

<211> 561

<212> PRT

<213> Arabidopsis thaliana

<400> 568

Met Glu Glu Asp Asp Gly Asp Ala Ser Thr Pro Phe Trp Leu Gln Ser  
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Arg Arg Asn Asn Thr Tyr Phe Arg Arg Thr Ala Ser Leu Gly Gly Arg  
 20 25 30

Thr Thr Thr Ile Ala Thr Gln Ile Phe Phe Ala Gly Thr Ala Ala Ile  
 35 40 45

Leu Ile Val Val Phe Ile Ile Pro Pro Phe Phe Ser Ser Val Ser Gln  
 50 55 60

047-E2F-PCT.ST25.txt

Ile Phe Arg Pro His Leu Val Arg Lys Ser Trp Asp Tyr Leu Asn Phe  
65 70 75 80

Val Leu Val Leu Phe Ala Val Leu Cys Gly Phe Leu Ser Arg Asn Thr  
85 90 95

Asn Asn Asp Glu Ser Asn His His Lys Glu Glu Asp Ile Arg Asn Lys  
100 105 110

Phe Ser Thr Ser Pro Ser Ile Ile Asp Arg Arg Ser Arg Val Ser Asn  
115 120 125

Ser Gly Thr Thr Pro Arg Tyr Trp Asn Asp Asp Arg Gly Gly Gly Gly  
130 135 140

Gly Asp Gln Thr Val Tyr Lys Arg Phe Ser Arg Leu Arg Ser Val Ser  
145 150 155 160

Ser Tyr Pro Asp Leu Arg Leu Arg Glu Tyr Glu Ala Asp Glu Arg Trp  
165 170 175

Arg Phe Tyr Asp Asp Thr Arg Val Ser Gln Cys Arg Tyr Glu Asp Val  
180 185 190

Asp Pro Ile Tyr Pro Asn Gln Ser Tyr Arg Asn Trp His Glu Glu Gly  
195 200 205

Lys Pro Pro Pro Glu Asp Val Asp Gln Thr Glu Asp Gly Asp Asn Gly  
210 215 220

Glu Gly Ser Lys Val Arg Asn Gly Gly Ser Glu Thr Glu Lys Val Glu  
225 230 235 240

Val Val Ala Thr Ala Glu Ala Glu Val Val Glu Glu Leu Lys Val Pro  
245 250 255

Ser Ala Pro Pro Tyr Ile Pro Ser Pro Pro Pro Ser Pro Pro Arg Pro  
260 265 270

Pro Pro Ala Lys Gln Ala Lys Arg Lys Thr Asn Arg Val Tyr Gln Asp  
275 280 285

Val Ser Pro Gln Glu Glu Lys Lys Glu Arg Asp Asp Phe Val Ala Thr  
290 295 300

Thr Thr Pro Ile Pro Pro Pro Ala Thr Val Tyr Gln Lys Ser Asn Lys  
305 310 315 320

047-E2F-PCT.ST25.txt

Gln Glu Lys Lys Lys Gly Gly Ala Thr Lys Asp Phe Leu Ile Ala Leu  
325 330 335

Arg Arg Lys Lys Lys Lys Gln Arg Gln Gln Ser Ile Asp Gly Leu Asp  
340 345 350

Leu Leu Phe Gly Ser Asp Pro Pro Leu Val Tyr Ser Pro Pro Pro Pro  
355 360 365

Pro Pro Pro Pro Pro Pro Phe Phe Gln Gly Leu Phe Ser Ser Lys Lys  
370 375 380

Gly Lys Ser Lys Lys Asn Asn Ser Asn Pro Pro Pro Pro Pro Pro  
385 390 395 400

Pro Pro Pro Glu Arg Arg Tyr Glu Ser Arg Ala Ser Thr Ser Lys Leu  
405 410 415

Arg Lys Ala Pro Val Glu Ser Arg Thr Ser Lys Pro Asn Pro Pro Ala  
420 425 430

Lys Val Thr Gln Tyr Val Gly Thr Gly Ser Glu Ser Pro Leu Met Pro  
435 440 445

Ile Pro Pro Pro Pro Pro Pro Pro Phe Lys Met Pro Ala Trp Lys  
450 455 460

Phe Val Lys Arg Gly Asp Tyr Val Arg Met Ala Ser Asp Ile Ser Ile  
465 470 475 480

Ser Ser Asp Glu Pro Asp Asp Pro Asp Val Ala Gln Ser Ala Gly Ser  
485 490 495

Lys Glu Ala Ala Gly Ser Met Phe Cys Pro Ser Pro Asp Val Asp Thr  
500 505 510

Lys Ala Asp Asp Phe Ile Ala Arg Phe Arg Ala Gly Leu Lys Leu Glu  
515 520 525

Lys Met Asn Ser Val Lys Arg Gly Arg Ser Asn Leu Gly Pro Glu Pro  
530 535 540

Gly Leu His Glu Ser Gly Ser Ser Thr Gly Tyr Arg Pro Ser Pro Ser  
545 550 555 560

Val

&lt;210&gt; 569

&lt;211&gt; 753

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 569

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ttgggcgagg agttcaaagg atacgttttc aagatcaagg gtggttgca taagcaagggt      180
ttcccaatga agcaggaggat ttgactcca ggccgtgttc gccttttgc taccgaggga      240
actccttgct tcagaggaca tggaggaga actggtgaga ggagaagaaa gtctgttcgt      300
ggttgcatcg tgagccctga tctctctgtt ctgaaccttg tcattgtgaa gaagggtgag      360
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tccaagatcc gtaaaactgtt taacctcaag aaggaagatg atgtcaggac ctatgtcaac      480
acttaccgcc gcaagttcac aaacaagaag ggcaaggaag ttagcaaagc ccctaagatc      540
cagaggcttg tgaccctcat gactcttcag aggaagagag ctagaattgc tgacaagaag      600
aagaaaattg ctaaggctaa ttctgatgct gctgattacc agaagcttct gcctcgagg      660
ttgaaggaa acgctgacag gaggagttag agtttggcaa agaagaggtc gagactctct      720
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&lt;210&gt; 570

&lt;211&gt; 250

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 570

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Met Lys Phe Asn Val Ala Asn Pro Thr Thr Gly Cys Gln Lys Lys Leu
 1          5          10
Glu Ile Asp Asp Gln Lys Leu Arg Ala Phe Tyr Asp Lys Arg Ile
          20          25          30
Ser Gln Glu Val Ser Gly Asp Ala Leu Gly Glu Glu Phe Lys Gly Tyr
          35          40          45

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047-E2F-PCT.ST25.txt

Val Phe Lys Ile Lys Gly Gly Cys Asp Lys Gln Gly Phe Pro Met Lys  
50 55 60

Gln Gly Val Leu Thr Pro Gly Arg Val Arg Leu Leu Leu His Arg Gly  
65 70 75 80

Thr Pro Cys Phe Arg Gly His Gly Arg Arg Thr Gly Glu Arg Arg Arg  
85 90 95

Lys Ser Val Arg Gly Cys Ile Val Ser Pro Asp Leu Ser Val Leu Asn  
100 105 110

Leu Val Ile Val Lys Lys Gly Glu Asn Asp Leu Pro Gly Leu Thr Asp  
115 120 125

Thr Glu Lys Pro Arg Met Arg Gly Pro Lys Arg Ala Ser Lys Ile Arg  
130 135 140

Lys Leu Phe Asn Leu Lys Lys Glu Asp Asp Val Arg Thr Tyr Val Asn  
145 150 155 160

Thr Tyr Arg Arg Lys Phe Thr Asn Lys Lys Gly Lys Glu Val Ser Lys  
165 170 175

Ala Pro Lys Ile Gln Arg Leu Val Thr Pro Leu Thr Leu Gln Arg Lys  
180 185 190

Arg Ala Arg Ile Ala Asp Lys Lys Lys Lys Ile Ala Lys Ala Asn Ser  
195 200 205

Asp Ala Ala Asp Tyr Gln Lys Leu Leu Ala Ser Arg Leu Lys Glu Gln  
210 215 220

Arg Asp Arg Arg Ser Glu Ser Leu Ala Lys Lys Arg Ser Arg Leu Ser  
225 230 235 240

Ser Ala Ala Ala Lys Pro Ser Val Thr Ala  
245 250

<210> 571

<211> 1623

<212> DNA

<213> Arabidopsis thaliana

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<400> 571
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tgtgcgtttc tccaagagct taatgattct gttaacgccca agtttattga ggagaatcca 360
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tag 1623

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<210> 572

<211> 540



&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 572

Met Gln Ala Val Lys Arg Ser Arg Arg His Val Glu Glu Glu Pro Thr  
 1 5 10 15

Met Val Glu Pro Lys Thr Lys Tyr Asp Arg Gln Leu Arg Ile Trp Gly  
 20 25 30

Glu Val Gly Gln Ala Ala Leu Glu Glu Ala Ser Ile Cys Leu Leu Asn  
 35 40 45

Cys Gly Pro Thr Gly Ser Glu Ala Leu Lys Asn Leu Val Leu Gly Gly  
 50 55 60

Val Gly Ser Ile Thr Val Val Asp Gly Ser Lys Val Gln Phe Gly Asp  
 65 70 75 80

Leu Gly Asn Asn Phe Met Val Asp Ala Lys Ser Val Gly Gln Ser Lys  
 85 90 95

Ala Lys Ser Val Cys Ala Phe Leu Gln Glu Leu Asn Asp Ser Val Asn  
 100 105 110

Ala Lys Phe Ile Glu Glu Asn Pro Asp Thr Leu Ile Thr Thr Asn Pro  
 115 120 125

Ser Phe Phe Ser Gln Phe Thr Leu Val Ile Ala Thr Gln Leu Val Glu  
 130 135 140

Asp Ser Met Leu Lys Leu Asp Arg Ile Cys Arg Asp Ala Asn Val Lys  
 145 150 155 160

Leu Val Leu Val Arg Ser Tyr Gly Leu Ala Gly Phe Val Arg Ile Ser  
 165 170 175

Val Lys Glu His Pro Ile Ile Asp Ser Lys Pro Asp His Phe Leu Asp  
 180 185 190

Asp Leu Arg Leu Asn Asn Pro Trp Pro Glu Leu Lys Ser Phe Val Glu  
 195 200 205

Thr Ile Asp Leu Asn Val Ser Glu Pro Ala Ala Ala His Lys His Ile  
 210 215 220

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Pro Tyr Val Val Ile Leu Val Lys Met Ala Glu Trp Ala Gln Ser  
225 230 235 240

His Ser Gly Asn Leu Pro Ser Thr Arg Glu Glu Lys Lys Glu Phe Lys  
245 250 255

Asp Leu Val Lys Ser Lys Met Val Ser Thr Asp Glu Asp Asn Tyr Lys  
260 265 270

Glu Ala Ile Glu Ala Ala Phe Lys Val Phe Ala Pro Arg Gly Ile Ser  
275 280 285

Ser Glu Val Gln Lys Leu Ile Asn Asp Ser Cys Ala Glu Val Asn Ser  
290 295 300

Asn Ser Ser Ala Phe Trp Val Met Val Ala Ala Leu Lys Glu Phe Val  
305 310 315 320

Leu Asn Glu Gly Gly Glu Ala Pro Leu Glu Gly Ser Ile Pro Asp  
325 330 335

Met Thr Ser Ser Thr Glu His Tyr Ile Asn Leu Gln Lys Ile Tyr Leu  
340 345 350

Ala Lys Ala Glu Ala Asp Phe Leu Val Ile Glu Glu Arg Val Lys Asn  
355 360 365

Ile Leu Lys Lys Ile Gly Arg Asp Pro Ser Ser Ile Pro Lys Pro Thr  
370 375 380

Ile Lys Ser Phe Cys Lys Asn Ala Arg Lys Leu Lys Leu Cys Arg Tyr  
385 390 395 400

Arg Met Val Glu Asp Glu Phe Arg Asn Pro Ser Val Thr Glu Ile Gln  
405 410 415

Lys Tyr Leu Ala Asp Glu Asp Tyr Ser Gly Ala Met Gly Phe Tyr Ile  
420 425 430

Leu Leu Arg Ala Ala Asp Arg Phe Ala Ala Asn Tyr Asn Lys Phe Pro  
435 440 445

Gly Gln Phe Asp Gly Gly Met Asp Glu Asp Ile Ser Arg Leu Lys Thr  
450 455 460

Thr Ala Leu Ser Leu Leu Thr Asp Leu Gly Cys Asn Gly Ser Val Leu  
465 470 475 480

Pro Asp Asp Leu Ile His Glu Met Cys Arg Phe Gly Ala Ser Glu Ile  
 485 490 495

His Val Val Ser Ala Phe Val Gly Gly Ile Ala Ser Gln Glu Val Ile  
 500 505 510

Lys Leu Val Thr Lys Gln Phe Val Pro Met Leu Gly Thr Tyr Ile Phe  
 515 520 525

Asn Gly Ile Asp His Lys Ser Gln Leu Leu Lys Leu  
 530 535 540

<210> 573

<211> 1881

<212> DNA

<213> Arabidopsis thaliana

<400> 573  
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 tctccttcgc gtcgtgtacg agaactttta gctttgtgtt tcagttcagt tgaagaagcc 180  
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 tatgagaacg tagccttgga tgctaacaat gaactggaga acgatgttat tgaagaagta 300  
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 actcctttat tgcattgggt ctctaaagta tttattttga tccagaggcg tcaactcagag 600  
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 gacgtgcaag ttgaagattt atttgataag gctctaggca ttgcctcttc aattcgagac 720  
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 atcacgggga atgacactga aaaattaatg agcacggttg ctggagatga tgatgagttt 960  
 atcacctctt tccctgacat cagcttgggt gcatcgcttt tattcatctg tgcaagatc 1020

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gtgagctgca gcactgctga gaacctcaag gaggatcatg gccaagaatc ttcactcgac 1800
gatgtagggc ttctgaacc aattgaattg gttctatatc gatgcatcga gtcggtggaa 1860
gaaaagtga aaagtcatta g 1881

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&lt;210&gt; 574

&lt;211&gt; 626

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 574

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Met Val Lys Phe Ala Ile Ile Asn Thr Leu Thr Val Asn Glu Thr Trp
1           5           10           15

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Ala Lys Leu Lys Ser Phe Gly Val Met Glu Ser Ser Ile Glu Gly Ser
20           25           30

```

```

Ser Glu Ser Thr Thr Val Thr Thr Ser Pro Ser Arg Arg Val Arg Glu
35           40           45

```

```

Leu Leu Ala Leu Cys Phe Ser Ser Val Glu Glu Ala Gly Gly Phe Glu
50           55           60

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Asp Phe Glu Ser Phe Val Thr Glu Leu Val Ser Cys Leu Asp Ser Leu
65           70           75           80

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Tyr Glu Asn Val Ala Leu Asp Ala Asn Asn Glu Leu Glu Asn Asp Val  
85 90 95

Ile Glu Glu Val Leu Asp Glu Ile Leu Lys Val Leu Ser Ser Pro Gln  
100 105 110

Met Asp Gln Asp Val Ile Asp Ala Leu Ser Phe His Leu Pro Lys Val  
115 120 125

Thr Ser Lys Phe Ala Asp Ile Ser Ser Arg Cys Leu Gln Leu Val Glu  
130 135 140

Glu Ile Val Asp Arg Phe Val Glu Ala Cys Asn Pro Arg Asp Met Leu  
145 150 155 160

Ser Ile Leu Cys Glu Ala Leu Asp Ala Ala Arg Cys Tyr His Ser Ala  
165 170 175

Ser Thr Cys Ser Thr Pro Leu Leu His Gly Leu Ser Lys Val Phe Ile  
180 185 190

Leu Ile Gln Arg Arg His Tyr Glu Gln Leu Lys Val Ala Val Pro Ile  
195 200 205

Val Leu Asn Val Leu Lys Asp Ile Ser Leu Glu Thr Asp Val Gln Val  
210 215 220

Glu Asp Leu Phe Asp Lys Ala Leu Gly Ile Ala Ser Ser Ile Arg Asp  
225 230 235 240

Val Ser Ser Lys Leu Asn Asn Glu Glu Glu Ala Lys Val Arg Cys Leu  
245 250 255

Leu Cys Leu Tyr Val Ile Gln Ile Thr Ala Ile Ile Ser Val Ser Ile  
260 265 270

Arg Asp Lys Ala Ala Ser Cys Ile Pro Leu Val Ile Gln Leu Glu Pro  
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Phe Leu Thr Ser Cys Gly Leu Thr His Leu Gly Leu Ile Thr Gly Asn  
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Asp Thr Glu Lys Leu Met Ser Thr Val Ala Gly Asp Asp Asp Glu Phe  
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 Tyr Ala Pro Asp Ala Asp Leu Arg Lys Lys Thr Phe Glu Ala Leu Lys  
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 Arg Val Leu Ser Asp Ile Pro Ala Pro His Arg Phe Asp Val Leu Arg  
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 Ala Leu Val Thr Asn Ser Arg Ser Pro Ser Met Thr Ala Ile Leu Leu  
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 Gly Leu Val Lys Asp Ser Met Ser Lys Ser Ser Leu Gln Asp Thr Asp  
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Val Arg Ile His Ser Glu Asn Thr Gly Asn Thr Ala Ile Leu Asn Leu  
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Leu Lys Glu Val Ser Glu Glu Val Ala Lys Tyr Lys Val Gly Ala Pro  
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 210 215 220



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Glu Phe Gly Glu Gly Gly Leu Leu Trp Gly Glu Cys Ser Ser Arg Asn  
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Lys Asp Val Tyr Gly Leu Asp Asp Glu Val Ser Phe Arg Asn Val Asn  
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Val Pro Ser Lys Asn Arg Pro Arg Pro Leu His Leu Gly Thr Ala Thr  
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Cys Val Ser Ser Ala Lys Leu Val Lys Leu Leu Glu Gln Arg Glu Ala  
340 345 350

Asn Tyr Ile Glu Phe Cys Arg Ile Lys Asn Val Leu Asp Asp Val Leu  
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His Met His Arg His Ala Glu Leu Val Glu Ile Leu Lys Leu Leu Met  
370 375 380

Asp Pro Thr Trp Val Ala Thr Gly Leu Lys Ile Asp Phe Asp Thr Phe  
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Pro Asn Glu Phe Phe Tyr Asp Met Glu Ser Ser Trp Arg Gly Arg Val  
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Leu Val Ile Ser Lys Ala Leu Phe Ser His Ala Cys Thr Val His Asn  
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Tyr Ser Glu Gly Arg Arg Arg Lys Trp Val Phe Pro Thr Leu Val Gly  
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Lys Leu Thr Gly Leu Ser Pro Tyr Trp Phe Asp Val Ser Ser Gly Thr  
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 915 920 925

Ser Cys Val Tyr Val Met Arg Arg Pro Asp Lys Arg Leu Tyr Ile Gly  
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Gln Thr Asp Asp Leu Glu Gly Arg Ile Arg Ala His Arg Ala Lys Glu  
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Gly Leu Gln Gly Ser Ser Phe Leu Tyr Leu Met Val Gln Gly Lys Ser  
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485 490 495

Met Arg Glu Gln Asn Val Phe Glu Thr Leu Ile Gly Lys Gln Gln Gln  
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<211> 1998

<212> DNA

<213> *Arabidopsis thaliana*

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<212> PRT

<213> Arabidopsis thaliana

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 Thr Gly Ile Val Pro Asn Leu Asn Ser Ser Ala Ala Leu Leu Ala Phe  
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 Ala Lys Pro Phe Thr Arg Gln Glu Asn Thr Met Ile Gln Thr Ser Ala  
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 Val Ala Cys Tyr Gly Ile Ala Val Gly Gly Gly Phe Ala Ser Tyr Leu  
 115 120 125  
 Leu Gly Leu Asn His Lys Thr Tyr Val Leu Ser Gly Val Asn Leu Glu  
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 Gly Asn Ser Pro Lys Ser Val Lys Glu Pro Gly Leu Gly Trp Met Thr  
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Ala Tyr Leu Phe Val Val Cys Phe Ile Gly Leu Phe Val Leu Ile Pro  
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Leu Arg Lys Val Met Ile Val Asp Leu Lys Leu Thr Tyr Pro Ser Gly  
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195 200 205

Gln Ala Lys Lys Gln Val Arg Gly Phe Met Lys Tyr Phe Ser Phe Ser  
210 215 220

Phe Leu Trp Gly Phe Phe Gln Trp Phe Phe Ser Gly Ile Glu Asp Cys  
225 230 235 240

Gly Phe Ala Gln Phe Pro Thr Phe Gly Leu Lys Ala Trp Lys Gln Thr  
245 250 255

Phe Phe Phe Asp Phe Ser Met Thr Phe Val Gly Ala Gly Met Ile Cys  
260 265 270

Ser His Leu Val Asn Leu Ser Leu Leu Leu Gly Ala Ile Leu Ser Tyr  
275 280 285

Gly Leu Met Trp Pro Leu Leu Asp Lys Leu Lys Gly Ser Trp Phe Pro  
290 295 300

Asp Asn Leu Asp Glu His Asn Met Lys Ser Ile Tyr Gly Tyr Lys Val  
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Phe Leu Ser Val Ala Leu Ile Leu Gly Asp Gly Leu Tyr Thr Phe Val  
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Lys Ile Leu Phe Val Thr Ile Ala Asn Val Asn Ala Arg Leu Lys Asn  
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Lys Pro Asn Asp Leu Asp Asp Val Gly His Lys Lys Gln Arg Lys Asp  
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Pro Leu Ile Phe Pro Gln Leu Lys Trp Tyr Tyr Val Ile Val Ala Tyr  
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Thr Asp Ile Asn Met Ala Tyr Asn Tyr Gly Lys Ile Gly Leu Phe Val  
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450 455 460

Gly Cys Gly Leu Ile Lys Ser Val Val Ser Val Ser Cys Ile Leu Met  
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Phe Ala Ser Gln Met Ile Gly Thr Val Val Gly Cys Ile Val Thr Pro  
500 505 510

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515 520 525

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530 535 540

Leu Gly Val Gln Gly Phe Ser Ala Leu Pro Leu His Cys Leu Gln Met  
545 550 555 560

Cys Tyr Gly Phe Phe Gly Phe Ala Val Leu Val Asn Val Val Arg Asp  
565 570 575

Leu Thr Pro Ala Lys Ile Gly Arg Phe Met Pro Leu Pro Thr Ala Met  
580 585 590

Ala Val Pro Phe Leu Val Gly Ala Tyr Phe Ala Ile Asp Met Cys Val  
595 600 605

Gly Thr Leu Ile Val Phe Val Trp Glu Lys Met Asn Arg Lys Lys Ala  
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Glu Phe Met Val Pro Ala Val Ala Ser Gly Leu Ile Cys Gly Glu Gly  
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Leu Trp Thr Leu Pro Ala Ala Val Leu Ala Leu Ala Gly Val Lys Pro  
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&lt;211&gt; 798

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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&lt;210&gt; 584

&lt;211&gt; 265

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 584

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20      25      30

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Asp Ala Leu Pro Pro Glu Trp Thr Asp Gln Phe Glu Ser Gly Ile Gln
Page 905

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Thr Ile Ala Val Ile Gln Ala Gly His Gly Leu Leu Gln Leu Gly Ser  
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Cys Lys Ile Ile Pro Glu Asp Leu His Phe Val Leu Arg Met Arg Gln  
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Met Phe Glu Ser Ile Gly Tyr Arg Ser Gly Phe Tyr Leu Ser Gln Leu  
85 90 95

Phe Ser Ser Asn Arg Thr Ala Thr Pro Ser Ser Ser Thr Val Pro Asn  
100 105 110

Gln Ile Pro Gln Ser Gln Gly Phe Asn Trp Gly Ser His Ser Pro Leu  
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Leu Pro Ser Pro Ser Phe Gln Asn Gln Leu Pro Ala Ser Ala Arg Phe  
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Gly Phe Leu Gln Asp Asn Asn Val Pro Pro Gln Met Leu Pro Pro Met  
145 150 155 160

Glu Glu His Glu Asp Asp Ile Lys Trp Pro Asn Gly Leu Ser Leu Phe  
165 170 175

Asn Ala Leu Thr Gly Arg Ala Asp Glu Ala Ser Arg Leu Leu Phe Asn  
180 185 190

Gln Glu Gln Asn Pro Met Asn Val Glu Asn Gln Asn Glu Phe Leu Asn  
195 200 205

Leu Glu Gly His His Pro Asn Lys Phe Arg Arg Ser Tyr Thr Leu Pro  
210 215 220

Ala Arg Met Asp Ser Ser Ser Ser Thr Ser Leu Asp Gln Gln Gln  
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<210> 585

<211> 1758



&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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<213> Arabidopsis thaliana

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35 40 45

Pro Phe Ile Leu Gly Asn Glu Cys Cys Glu Arg Leu Ala Tyr Tyr Gly  
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65 70 75 80

Asn Val Ser Ala Ala Thr Asn Val Thr Thr Trp Gln Gly Thr Cys Tyr  
85 90 95

Leu Thr Pro Leu Ile Gly Ala Val Leu Ala Asp Ala Tyr Trp Gly Arg  
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Tyr Trp Thr Ile Ala Cys Phe Ser Gly Ile Tyr Phe Ile Gly Met Ser  
115 120 125

Ala Leu Thr Leu Ser Ala Ser Val Pro Ala Leu Lys Pro Ala Glu Cys  
130 135 140

Ile Gly Asp Phe Cys Pro Ser Ala Thr Pro Ala Gln Tyr Ala Met Phe  
145 150 155 160

Phe Gly Gly Leu Tyr Leu Ile Ala Leu Gly Thr Gly Gly Ile Lys Pro  
165 170 175

Cys Val Ser Ser Phe Gly Ala Asp Gln Phe Asp Asp Thr Asp Ser Arg  
180 185 190

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 Asn Arg Gly Trp Gly Leu Gly Phe Gly Ile Pro Thr Val Phe Met Gly  
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 Glu His Thr Asp Asp Cys Gln Tyr Leu Asp Lys Ala Ala Val Ile Ser  
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435  
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Phe	His	Pro	Thr	Asp	Glu	Glu	Leu	Val	Ser	Tyr	Tyr	Leu	Lys	Arg	Lys
		35					40					45			

Val	Leu	Gly	Gln	Pro	Val	Arg	Phe	Asp	Ala	Ile	Gly	Glu	Val	Asp	Ile
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Tyr	Lys	His	Glu	Pro	Trp	Asp	Leu	Ala	Val	Phe	Ser	Arg	Leu	Lys	Thr
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Lys	Lys	Thr	Leu	Val	Phe	His	Ser	Gly	Arg	Ala	Pro	Asp	Gly	Leu	Arg
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Lys Asn Gly Asn Leu Val Gln Asp Ala Tyr Val Leu Cys Arg Val Phe  
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180 185 190

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Glu Asp Ala Ala Asn Asn Phe Ala Arg Gly His Tyr Thr Val Gly Lys  
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Cys Thr Gly Leu Gln Gly Phe Leu Val Phe Asn Ala Val Gly Gly Gly  
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Cys Gly Ile Asn Tyr Gln Pro Pro Thr Val Val Pro Gly Gly Asp Leu  
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Page 917

130

135

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Ser Asn Ser Leu Thr Cys Ile Ser Gln Ala Arg Ala Ala Leu Glu Leu  
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Glu Gln Ser Ser Gly Phe Pro Arg Ser Lys Val Val Phe Thr Leu Lys  
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Ser Ser Leu Phe Met Cys Lys Ala Glu Lys Glu Glu Val Ser Val Leu  
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Lys Arg Lys Thr His Trp Val Ser Trp Glu Lys Leu Cys Leu Ala Lys  
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1130

1135

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&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 596

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35      40      45

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Lys Glu Leu Asp Ser Ser Ser Glu Ala Val Ser Gly Asn Ser Asp Lys
50      55      60

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Val Gly Ala Asp Asp Leu Ser Asp Ser Glu Lys Glu Lys Pro Asn Leu
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Glu Ser Lys Val Lys Asp Val Glu Glu Glu Asp Val Gly Thr Lys Lys  
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Lys Ser Asp Asn Val Ile Glu Glu Glu Gly Val Glu Leu Thr Asp Lys  
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Asp Lys Ala Thr Glu Glu Gly Gly Gly Lys Leu Val Ser Glu Gly Asp  
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Ile Lys Glu Asp Asp Lys Asp Asp Glu Val Asp Lys Thr Ile Ser Asn  
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Asn Met Ser Asp Arg Ile Asp Gly Gln Ile Val Thr Asp Ser Asp Glu  
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Asp Val Asp Thr Glu Asp Glu Gly Glu Glu Lys Met Phe Asp Thr Ala  
690 695 700

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Met Asp Arg Pro Ala Gly Leu Ser Ser Ser Leu Arg Pro Leu Lys Pro  
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Leu Tyr Arg Leu Ala Leu Leu Ala Gly Arg Gln Ala Gly Gln Leu Phe  
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Ser Leu Asp Ala Ala Lys Lys Lys Ala Val Glu Ser Glu Ala Glu Gly  
835 840 845

Asn Glu Glu Leu Ile Phe Ser Leu Asn Ile Leu Val Leu Gly Lys Ala  
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Ser Val Lys Lys Val Met Lys Lys Cys Pro Pro Asp Ile Val Leu Tyr  
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Val Asp Arg Leu Asp Thr Gln Thr Arg Asp Leu Asn Asn Leu Pro Leu  
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Leu Arg Thr Ile Thr Ala Ser Leu Gly Thr Ser Ile Trp Lys Asn Ala  
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Leu Cys Arg Lys Asn Arg Glu Gly Val Lys Val Leu Pro Asn Gly  
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Gln Thr Trp Arg Ser Gln Leu Leu Leu Leu Cys Tyr Ser Leu Lys  
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Pro Tyr Leu Leu Ser Trp Leu Leu Gln Ser Arg Ala His Pro Lys  
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 Glu Tyr Asp Gln Leu Pro Pro Phe Lys Pro Leu Arg Lys Thr Gln  
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 Tyr Asp Tyr Arg Val Lys Leu Leu Gln Lys Lys Gln Trp Arg Glu  
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Gly Arg Asn Ser Lys Ile Ala Leu Arg Ala Gly Leu Asn Asn Lys  
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Met Ser Gly Gln Ile Thr Val Arg Thr Ser Ser Ser Asp Gln Leu  
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<212> PRT

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Gln Asn Ala Asn Leu Lys Asn Phe Ser Leu Ser Glu Leu Lys Ser Ala  
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Thr Arg Asn Phe Arg Pro Asp Ser Val Val Gly Glu Gly Gly Phe Gly  
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Pro Gly Thr Gly Ile Val Ile Ala Val Lys Arg Leu Asn Gln Glu Gly  
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930

935

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Val Val 1505	Tyr Thr Pro Ile 1510	Arg Glu Asp Gly Val 1515	Gln Gly His Pro
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Lys Glu 1535	Val Arg Gln Lys 1540	Leu Glu Thr Gly Leu 1545	Val Lys Phe Glu
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Val Arg 1595	Gly Ser Tyr Gly 1600	Pro Pro Phe His Val 1605	Glu Thr Phe Arg
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Val Asp 1625	Ile Val Val Gln 1630	Ser Arg His Leu Arg 1635	Asp Val Ile Val
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<212> PRT

<213> Arabidopsis thaliana

<400> 604

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			20					25					30		
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047-E2F-PCT.ST25.txt

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 Glu Gln Val Lys Glu Trp Leu Gln Asn Leu Gly Ile Gly Asp His Pro  
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 His Leu Pro Lys Phe Ser Lys Ser Asp Asp Ser Asn Arg Cys Cys  
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047-E2F-PCT.ST25.txt

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 Ala Ala Ile Glu Asn Ala Lys Ser Glu Ile Phe Ile Cys Gly Trp Trp  
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 Val Cys Pro Glu Leu Tyr Leu Arg Arg Pro Phe Asp Pro His Thr Ser  
 405 410 415  
 Ser Arg Leu Asp Asn Leu Leu Glu Asn Lys Ala Lys Gln Gly Val Gln  
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 Val Leu Arg Tyr Pro Asp His Phe Ser Ser Gly Val Tyr Leu Trp Ser  
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 His His Glu Lys Leu Val Ile Val Asp Asn Gln Val Cys Phe Ile Gly  
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 Gly Leu Asp Leu Cys Phe Gly Arg Tyr Asp Thr Phe Glu His Lys Val  
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 Gly Asp Asn Pro Ser Val Thr Trp Pro Gly Lys Asp Tyr Tyr Asn Pro  
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 Arg Glu Ser Glu Pro Asn Thr Trp Glu Asp Ala Leu Lys Asp Glu Leu  
 530 535 540  
 Glu Arg Lys Lys His Pro Arg Met Pro Trp His Asp Val His Cys Ala  
 Page 951

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Trp	Asn	Tyr	Ala 580	Lys	Arg	Asn	Lys	Ala 585	Pro	Tyr	Glu	Asp	Ser 590	Ile	Pro						
Leu	Leu	Met 595	Pro	Gln	His	His	Met 600	Val	Ile	Pro	His	Tyr 605	Met	Gly	Arg						
Gln	Glu 610	Glu	Ser	Asp	Ile	Glu 615	Ser	Lys	Lys	Glu	Glu 620	Asp	Ser	Ile	Arg						
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Phe	Arg	Lys 675	Ser	Lys	Ile	Glu	Pro 680	Val	Asp	Gly	Asp	Thr 685	Pro	Met	Arg						
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Gly 705	Ser	Asn	Ala	Ile	Asp 710	Ser	Glu	Trp	Trp	Glu 715	Thr	Gln	Asp	His	Asp 720						
Tyr	Gln	Val	Gly	Ser 725	Pro	Asp	Glu	Thr	Gly 730	Gln	Val	Gly	Pro	Arg 735	Thr						
Ser	Cys	Arg	Cys 740	Gln	Ile	Ile	Arg	Ser 745	Val	Ser	Gln	Trp	Ser 750	Ala	Gly						
Thr	Ser	Gln 755	Val	Glu	Glu	Ser	Ile 760	His	Ser	Ala	Tyr	Arg 765	Ser	Leu	Ile						
Asp	Lys 770	Ala	Glu	His	Phe	Ile 775	Tyr	Ile	Glu	Asn	Gln 780	Phe	Phe	Ile	Ser						
Gly 785	Leu	Ser	Gly	Asp	Asp 790	Thr	Val	Lys	Asn	Arg 795	Val	Leu	Glu	Ala	Leu 800						

047-E2F-PCT.ST25.txt

047-E2F-PCT.ST25.txt

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<212> DNA

<213> Arabidopsis thaliana

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<212> PRT

<213> Arabidopsis thaliana

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			20					25					30		

Arg	Val	Thr	Ser	Ile	Lys	Ile	Asp	Pro	Tyr	Leu	Asn	Thr	Asp	Ala	Gly
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Thr	Met	Ser	Pro	Phe	Glu	His	Gly	Glu	Val	Phe	Val	Leu	Asp	Asp	Gly
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047-E2F-PCT.ST25.txt

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145 150 155 160

Glu Ala Leu Gly Gln Phe Ser Tyr Arg Val Gly Pro Gly Asn Phe Cys  
165 170 175

Leu Val His Val Ser Leu Val Pro Val Leu Asn Val Val Gly Glu Gln  
180 185 190

Lys Thr Lys Pro Thr Gln His Ser Val Lys Gly Leu Arg Gly Leu Gly  
195 200 205

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210 215 220

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Ile Phe Thr Leu Tyr Asp Val Pro Asn Ile Trp Arg Ile Pro Leu Leu  
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290 295 300

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325 330 335

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 Ile Phe Met Pro Glu Gly Ser Lys Thr His Met Gly Gly Thr Met Arg  
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 545 550 555 560  
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&lt;211&gt; 1020

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 607

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&lt;210&gt; 608

&lt;211&gt; 339

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 608

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Gly Arg Asp Glu Phe Arg Lys Tyr His Ala Ser Ala Ile Lys Val Pro  
85 90 95

Gly Pro Glu Val Glu Lys Leu Ala Glu Leu Ala Gly Lys Asn Asn Val  
100 105 110

Tyr Leu Val Met Gly Ala Ile Glu Lys Asp Gly Tyr Thr Leu Tyr Cys  
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Thr Ala Leu Phe Phe Ser Pro Gln Gly Gln Phe Leu Gly Lys His Arg  
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Lys Leu Met Pro Thr Ser Leu Glu Arg Cys Ile Trp Gly Gln Gly Asp  
145 150 155 160

Gly Ser Thr Ile Pro Val Tyr Asp Thr Pro Ile Gly Lys Leu Gly Ala  
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180 185 190

Ala Lys Gly Ile Glu Leu Tyr Cys Ala Pro Thr Ala Asp Gly Ser Lys  
195 200 205

Glu Trp Gln Ser Ser Met Leu His Ile Ala Ile Glu Gly Gly Cys Phe  
210 215 220

Val Leu Ser Ala Cys Gln Phe Cys Leu Arg Lys Asp Phe Pro Asp His  
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Pro Asp Tyr Leu Phe Thr Asp Trp Tyr Asp Asp Lys Glu Pro Asp Ser  
245 250 255

Ile Val Ser Gln Gly Gly Ser Val Ile Ile Ser Pro Leu Gly Gln Val  
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280 285

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047-E2F-PCT.ST25.txt

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<213> Arabidopsis thaliana

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35 40 45

047-E2F-PCT.ST25.txt

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 Tyr Ser Glu Cys Thr His Pro Ala Gln Ile Tyr Lys Lys Val Met Ser  
 225 230 235 240  
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 245 250 255  
 Cys Phe Ile Glu Lys Cys Leu Ala Thr Val Ser Leu Arg Val Ser Ala  
 260 265 270  
 Arg Glu Leu Leu Asp Asp Pro Phe Leu Arg Ile Asp Asp Gly Glu Phe  
 275 280 285  
 Asp Leu Arg Ser Val Asp Met Glu Asp Ser Val Gly Pro Leu Tyr Arg  
 290 295 300



047-E2F-PCT.ST25.txt

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 340 345 350  
 Gln Asn Gly Trp Ala Tyr Asn Pro Ala Glu Thr Glu Glu Thr His Gly  
 355 360 365  
 Ile Glu Leu Phe Glu Ser Arg Asn Asn Asp Asp Gln Glu Glu Glu Lys  
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 Lys Ser Gly Asn Val Asp Ile Thr Ile Lys Gly Lys Arg Arg Asp Asp  
 385 390 395 400  
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 Page 963

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Page 967

50

55

60

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Gly Gly Gly Thr Val Ala Val Lys Trp Leu Lys Arg Gly Gly Gly Glu  
705 710 715 720

Glu Gly Asp Gly Thr Glu Val Ser Val Ala Glu Met Glu Ile Leu Gly  
725 730 735

Lys Ile Arg His Arg Asn Val Leu Lys Leu Tyr Ala Cys Leu Val Gly  
740 745 750

Arg Gly Ser Arg Tyr Leu Val Phe Glu Phe Met Glu Asn Gly Asn Leu  
755 760 765

Tyr Gln Ala Leu Gly Asn Asn Ile Lys Gly Gly Leu Pro Glu Leu Asp  
770 775 780

Trp Leu Lys Arg Tyr Lys Ile Ala Val Gly Ala Ala Lys Gly Ile Ala  
 785 790 795 800  
 Tyr Leu His His Asp Cys Cys Pro Pro Ile Ile His Arg Asp Ile Lys  
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 Ser Ser Asn Ile Leu Leu Asp Gly Asp Tyr Glu Ser Lys Ile Ala Asp  
 820 825 830  
 Phe Gly Val Ala Lys Val Ala Asp Lys Gly Tyr Glu Trp Ser Cys Val  
 835 840 845  
 Ala Gly Thr His Gly Tyr Met Ala Pro Glu Leu Ala Tyr Ser Phe Lys  
 850 855 860  
 Ala Thr Glu Lys Ser Asp Val Tyr Ser Phe Gly Val Val Leu Leu Glu  
 865 870 875 880  
 Leu Val Thr Gly Leu Arg Pro Met Glu Asp Glu Phe Gly Glu Gly Lys  
 885 890 895  
 Asp Ile Val Asp Tyr Val Tyr Ser Gln Ile Gln Gln Asp Pro Arg Asn  
 900 905 910  
 Leu Gln Asn Val Leu Asp Lys Gln Val Leu Ser Thr Tyr Ile Glu Glu  
 915 920 925  
 Ser Met Ile Arg Val Leu Lys Met Gly Leu Leu Cys Thr Thr Lys Leu  
 930 935 940  
 Pro Asn Leu Arg Pro Ser Met Arg Glu Val Val Arg Lys Leu Asp Asp  
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Val

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<211> 1305

<212> DNA

<213> Arabidopsis thaliana

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 catagtgagg ctttctgtat ccaggccagt tcgggctcaa gcctaactgc atctattttg 240  
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 taccctgact tgttgattga ccacctcctt aagacgacgg aacactgttc caatgatcaa 360  
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<210> 620

<211> 434

<212> PRT

<213> *Arabidopsis thaliana*

<400> 620

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 35 40 45  
 Thr Glu Asp Ile Gly Asp Leu Cys Ile Phe Leu Gly His Ser Glu Ala  
 50 55 60  
 Phe Cys Ile Gln Ala Ser Ser Gly Ser Ser Leu Thr Ala Ser Ile Leu  
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 Trp Ala Ile Thr Leu Arg Ser His Ser Lys Gln Val Arg Met Phe Ser  
 85 90 95  
 Ser Lys Pro Thr Tyr Pro Tyr Leu Leu Ile Asp His Leu Leu Lys Thr  
 100 105 110  
 Thr Glu His Cys Ser Asn Asp Gln Val Tyr Tyr Asp Asp Lys Tyr Tyr  
 115 120 125  
 Glu Lys Asn Leu Val Ile Lys Asp Gln Gly Leu Ala Glu Glu Val Arg  
 130 135 140  
 Glu Val Met Thr Val Gly Phe Ser His Lys Asp Asp Trp Arg Val His  
 145 150 155 160  
 Leu Glu Lys Ser Glu Asp Ser Ser Thr Ser Leu Met Met Val Ser Asn  
 165 170 175  
 Thr Ser Phe Val Pro Val Lys His Gln Leu Pro Pro Leu Ser Ser Asn  
 180 185 190  
 Cys Arg Ile Gln Asn Val Ala Ile Ser Asn Ser Val Asp Ile Lys Lys  
 195 200 205  
 Glu Asp Leu Val Val Ala Val Lys Phe Phe Gly Ser Asp Val Ser Leu  
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 Cys Lys Pro Phe Ser Asp Ser Ser Ser Glu Trp Ile Asn Ile Asn Thr  
 225 230 235 240  
 Ser Gly Ser Val His Pro Phe Ser Ser Leu Thr Tyr Ser Lys Lys Asn  
 245 250 255  
 Lys Lys Phe Leu Ser Val Ser Pro Ser Gly Thr Tyr Leu Trp Tyr Leu  
 260 265 270

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Asp Leu His Phe Asp Glu Asp Asp Val Glu Pro Tyr Ser Ser Tyr Leu  
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Tyr Phe Arg Glu Asp Pro Leu Leu Arg Leu Tyr Lys Met Asp Leu Glu  
290 295 300

Asp Tyr Ile Trp Arg Phe Arg Thr Asp His Leu Ala Glu Leu Pro Ser  
305 310 315 320

Gly Glu His Phe Leu Val Lys Trp Phe Phe Lys Asp Val Met Met Asn  
325 330 335

Val Gly Lys Ile Thr Gln Lys Thr Asp Gly Phe Lys Val Phe Arg Val  
340 345 350

Asp Thr Ile Cys Gly His Leu Thr Asn Thr Gln Asp Ile Gly Asp Leu  
355 360 365

Cys Ile Phe Leu Gly His Gly Glu Ala Tyr Cys Val Pro Ala Ser Ser  
370 375 380

Ser Pro Gly Leu Arg Pro Asn Ser Ile Tyr Tyr Val Gly Cys Asn Phe  
385 390 395 400

Gly Val His Asp Ile Ala Thr Asp Thr Thr Thr Asn Phe Tyr Thr His  
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Leu Ser

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<211> 1275

<212> DNA

<213> Arabidopsis thaliana

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gagtggcctt cacttactgt tgaatggctt cctgaccgtg aagaaccttc cggtaaagac 180  
tactccgttc agaagatgat tctcgggtacc catacctcgg agagcgagcc caattacttg 240

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cagataaatc atgatgggtga ggtaaatcga gctcgctata tgcctcaaaa ccctttcata 420
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<210> 622

<211> 424

<212> PRT

<213> Arabidopsis thaliana

<400> 622

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20 25 30

Asp Leu Val Ile Thr His Ala Leu Glu Trp Pro Ser Leu Thr Val Glu  
35 40 45

Trp Leu Pro Asp Arg Glu Glu Pro Ser Gly Lys Asp Tyr Ser Val Gln  
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50

55

60

Lys Met Ile Leu Gly Thr His Thr Ser Glu Ser Glu Pro Asn Tyr Leu  
 65 70 80  
 Met Leu Ala Gln Val Gln Leu Pro Leu Asp Asp Thr Glu Ser Glu Ala  
 85 90 95  
 Arg Gln Tyr Asp Asp Arg Ser Glu Phe Gly Gly Phe Gly Cys Ala  
 100 105 110  
 Thr Gly Lys Val Gln Ile Ile Gln Gln Ile Asn His Asp Gly Glu Val  
 115 120 125  
 Asn Arg Ala Arg Tyr Met Pro Gln Asn Pro Phe Ile Ile Ala Thr Lys  
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 Thr Val Asn Ala Glu Val Tyr Val Phe Asp Tyr Ser Lys His Pro Ser  
 145 150 155 160  
 Lys Pro Pro Leu Asp Gly Ala Cys Asn Pro Asp Leu Lys Leu Arg Gly  
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 His Ser Ser Glu Gly Tyr Gly Leu Ser Trp Ser Lys Phe Lys Gln Gly  
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 His Leu Leu Ser Gly Ser Asp Asp Ala Gln Ile Cys Leu Trp Asp Ile  
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 Ala His Glu Gly Val Val Glu Asp Val Ala Trp His Leu Arg His Glu  
 225 230 235 240  
 Tyr Leu Phe Gly Ser Val Gly Asp Asp Gln Tyr Leu Leu Ile Trp Asp  
 245 250 255  
 Leu Arg Ser Pro Ser Ala Ser Lys Pro Val Gln Ser Val Val Ala His  
 260 265 270  
 Ser Met Glu Val Asn Cys Leu Ala Phe Asn Pro Phe Asn Glu Trp Val  
 275 280 285  
 Val Ala Thr Gly Ser Thr Asp Lys Thr Val Lys Leu Phe Asp Leu Arg  
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Lys Leu Ser Thr Ala Leu His Thr Phe Asp Ser His Lys Glu Glu Val  
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Phe Gln Val Gly Trp Asn Pro Lys Asn Glu Thr Ile Leu Ala Ser Cys  
325 330 335

Cys Leu Gly Arg Arg Leu Met Val Trp Asp Leu Ser Arg Ile Asp Glu  
340 345 350

Glu Gln Thr Val Glu Asp Ala Glu Asp Gly Pro Pro Glu Leu Leu Phe  
355 360 365

Ile His Gly Gly His Thr Ser Lys Ile Ser Asp Phe Ser Trp Asn Pro  
370 375 380

Cys Glu Asp Trp Val Ile Ser Ser Val Ala Glu Asp Asn Ile Leu Gln  
385 390 395 400

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405 410 415

Gly Glu Glu Pro Ser Lys Ala Ser  
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<210> 623

<211> 1374

<212> DNA

<213> Arabidopsis thaliana

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aacgagcact tcatttacga catcacatca aagttgaaaa ctaaactttt gggttaactct 600

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&lt;210&gt; 624

&lt;211&gt; 457

&lt;212&gt; PR1

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 624

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Thr Ser Gly Phe Ser Met Phe Gly Thr Ala Val Ser Arg Ser Val Asn  
20 25 30

Gly Val Gln Gly Asn Glu Gly Val Glu Val Ile Asn Pro Glu Gly Gly  
35 40 45

Lys Glu Asp Ala Glu Glu Glu Ala Gln Lys Gly Arg Trp Lys Asp Glu  
50 55 60

Glu Arg Asp Ser Tyr Trp Lys Met Met Gln Lys Tyr Ile Gly Ser Asp  
65 70 75 80

Ile Thr Ser Met Val Thr Leu Pro Val Val Ile Phe Glu Pro Met Thr  
85 90 95

Met Leu Gln Lys Met Ala Glu Ile Met Glu Tyr Ser His Leu Leu Asp  
 100 105 110  
 Gln Ala Asp Glu Cys Glu Asp Pro Tyr Leu Arg Leu Val Tyr Ala Ser  
 115 120 125  
 Ser Trp Ala Ile Ser Val Tyr Tyr Ala Phe Gln Arg Thr Trp Lys Pro  
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 Phe Asn Pro Ile Leu Gly Glu Thr Tyr Glu Met Val Asn His Gly Gly  
 145 150 155 160  
 Ile Ser Phe Ile Ser Glu Gln Val Ser His His Pro Pro Met Ser Ala  
 165 170 175  
 Gly His Ala Glu Asn Glu His Phe Ile Tyr Asp Ile Thr Ser Lys Leu  
 180 185 190  
 Lys Thr Lys Leu Leu Gly Asn Ser Val Asp Val Tyr Pro Val Gly Arg  
 195 200 205  
 Thr Arg Val Thr Leu Lys Lys Asp Gly Val Val Leu Asp Leu Val Pro  
 210 215 220  
 Pro Leu Thr Lys Ile His Asn Leu Ile Phe Gly Arg Thr Trp Val Asp  
 225 230 235 240  
 Ser Pro Gly Glu Met Val Met Thr Asn Leu Thr Thr Gly Asp Lys Val  
 245 250 255  
 Val Leu Tyr Phe Gln Pro Cys Gly Trp Phe Gly Ser Gly Arg Tyr Glu  
 260 265 270  
 Val Asp Gly Tyr Val Tyr Ser Ala Ala Glu Glu Pro Lys Ile Met Met  
 275 280 285  
 Thr Gly Lys Trp Asn Glu Lys Met Ser Tyr Gln Pro Cys Asp Ala Glu  
 290 295 300  
 Gly Glu Pro Leu Pro Gly Thr Glu Leu Lys Glu Val Trp His Leu Ala  
 305 310 315 320  
 Asp Val Pro Lys Asn Asp Asn Phe Gln Tyr Thr His Phe Ala His Lys  
 325 330 335  
 Ile Asn Ser Phe Asp Thr Ala Pro Ala Lys Leu Leu Ala Ser Asp Ser  
 340 345 350

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Arg Ile Arg Pro Asp Arg Tyr Ser Leu Glu Gln Gly Asp Leu Ser Lys  
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Ala Gly Ser Glu Lys His Ser Leu Glu Glu Arg Gln Arg Ala Glu Lys  
370 375 380

Arg Thr Arg Glu Thr Lys Gly Gln Lys Phe Thr Pro Arg Trp Phe Asp  
385 390 395 400

Leu Thr Asp Glu Ile Thr Pro Thr Pro Trp Gly Asp Ile Glu Val Tyr  
405 410 415

Gln Tyr Asn Gly Lys Tyr Asn Glu His Arg Asp Thr Ala Glu Ser Ser  
420 425 430

Ser Ser Ala Ser Asn Glu Thr Asp Leu Lys Ser Ile Glu Phe Asn Pro  
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<211> 432

<212> DNA

<213> Arabidopsis thaliana

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ataacatgtg cagtgtgtga tggacatcta ggccatgttt tcaaaggcga aggttactct	360
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<210> 626

<211> 143

<212> PRT



<213> *Arabidopsis thaliana*

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35 40 45Lys Phe Glu Glu Gly Thr Tyr Ser Cys Ala Gly Cys Gly Thr Ala Leu  
50 55 60Tyr Lys Ser Thr Thr Lys Phe Asp Ser Gly Cys Gly Trp Pro Ala Phe  
65 70 75 80Phe Asp Ala Ile Pro Gly Ala Ile Lys Gln Thr Pro Glu Ala Gly Gly  
85 90 95Arg Arg Met Glu Ile Thr Cys Ala Val Cys Asp Gly His Leu Gly His  
100 105 110Val Phe Lys Gly Glu Gly Tyr Ser Thr Pro Thr Asp Gln Arg His Cys  
115 120 125Val Asn Ser Val Ser Leu Lys Phe Ala Ser Ala Asp Ser Ser Lys  
130 135 140

&lt;210&gt; 627

&lt;211&gt; 591

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 627

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gcacctggat caaccccaag tactggagga accactcctc ccactgcggg tgggaccaca 480  
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<211> 196

<212> PRT

<213> Arabidopsis thaliana

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35 40 45

Lys Thr Phe Arg Val Gly Asp Glu Leu Glu Phe Asp Phe Ala Ala Gly  
50 55 60

Arg His Asp Val Ala Val Val Ser Glu Ala Ala Phe Glu Asn Cys Glu  
65 70 75 80

Lys Glu Lys Pro Ile Ser His Met Thr Val Pro Pro Val Lys Ile Met  
85 90 95

Leu Asn Thr Thr Gly Pro Gln Tyr Phe Ile Cys Thr Val Gly Asp His  
100 105 110

Cys Arg Phe Gly Gln Lys Leu Ser Ile Thr Val Val Ala Ala Gly Ala  
115 120 125

Thr Gly Gly Ala Thr Pro Gly Ala Gly Ala Thr Pro Ala Pro Gly Ser  
130 135 140

Thr Pro Ser Thr Gly Gly Thr Thr Pro Pro Thr Ala Gly Gly Thr Thr  
145 150 155 160

Thr Pro Ser Gly Ser Ser Gly Thr Thr Thr Pro Ala Gly Asn Ala Ala  
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Val Ala Leu Phe  
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<211> 3267

<212> DNA

<213> Arabidopsis thaliana

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<211> 1088

<212> PRT

<213> Arabidopsis thaliana

<400> 630

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Ile Val Ala Lys Ser Thr Arg Ile Glu Ile His Leu Leu Ser Pro Gln  
 35 40 45

Gly Leu Gln Thr Ile Leu Asp Val Pro Leu Tyr Gly Arg Ile Ala Thr  
 50 55 60

Met Glu Leu Phe Arg Pro His Gly Glu Ala Gln Asp Phe Leu Phe Val  
 65 70 75 80

Ala Thr Glu Arg Tyr Lys Phe Cys Val Leu Gln Trp Asp Tyr Glu Ser  
 85 90 95

Ser Glu Leu Ile Thr Arg Ala Met Gly Asp Val Ser Asp Arg Ile Gly  
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Arg Pro Thr Asp Asn Gly Gln Ile Gly Ile Ile Asp Pro Asp Cys Arg  
 115 120 125

Val Ile Gly Leu His Leu Tyr Asp Gly Leu Phe Lys Val Ile Pro Phe  
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Asp Asn Lys Gly Gln Leu Lys Glu Ala Phe Asn Ile Arg Leu Glu Glu  
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Leu Gln Val Leu Asp Ile Lys Phe Leu Tyr Gly Cys Thr Lys Pro Thr  
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047-E2F-PCT.ST25.txt

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Tyr Glu Val Ser Leu Lys Asp Lys Asn Phe Val Glu Gly Pro Trp Ser  
195 200 205

Gln Asn Asn Leu Asp Asn Gly Ala Asp Leu Leu Ile Pro Val Pro Ser  
210 215 220

Pro Leu Cys Gly Val Leu Ile Ile Gly Glu Glu Thr Ile Val Tyr Cys  
225 230 235 240

Ser Ala Asn Ala Phe Lys Ala Ile Pro Ile Arg Pro Ser Ile Thr Lys  
245 250 255

Ala Tyr Gly Arg Val Asp Leu Asp Gly Ser Arg Tyr Leu Leu Gly Asp  
260 265 270

His Ala Gly Leu Ile His Leu Leu Val Ile Thr His Glu Lys Glu Lys  
275 280 285

Val Thr Gly Leu Lys Ile Glu Leu Leu Gly Glu Thr Ser Ile Ala Ser  
290 295 300

Ser Ile Ser Tyr Leu Asp Asn Ala Val Val Phe Val Gly Ser Ser Tyr  
305 310 315 320

Gly Asp Ser Gln Leu Ile Lys Leu Asn Leu Gln Pro Asp Ala Lys Gly  
325 330 335

Ser Tyr Val Glu Ile Leu Glu Lys Tyr Val Asn Leu Gly Pro Ile Val  
340 345 350

Asp Phe Cys Val Val Asp Leu Glu Arg Gln Gly Gln Gly Gln Val Val  
355 360 365

Thr Cys Ser Gly Ala Tyr Lys Asp Gly Ser Leu Arg Ile Val Arg Asn  
370 375 380

Gly Ile Gly Ile Asn Glu Gln Ala Ser Val Glu Leu Gln Gly Ile Lys  
385 390 395 400

Gly Met Trp Ser Leu Lys Ser Ser Ile Asp Glu Ala Phe Asp Thr Phe  
405 410 415

Leu Val Val Ser Phe Ile Ser Glu Thr Arg Ile Leu Ala Met Asn Ile  
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 Thr Ser Asn Ser Val Arg Leu Val Ser Ser Thr Thr Arg Glu Leu Arg  
 465 470 475 480  
 Asn Lys Trp Asp Ala Pro Ala Gly Phe Ser Val Asn Val Ala Thr Ala  
 485 490 495  
 Asn Ala Ser Gln Val Leu Leu Ala Thr Gly Gly Gly His Leu Val Tyr  
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 Leu Glu Ile Gly Asp Gly Thr Leu Thr Glu Val Lys His Val Leu Leu  
 515 520 525  
 Glu Tyr Glu Val Ser Cys Leu Asp Ile Asn Pro Ile Gly Asp Asn Pro  
 530 535 540  
 Asn Tyr Ser Gln Leu Ala Ala Val Gly Met Trp Thr Asp Ile Ser Val  
 545 550 555 560  
 Arg Ile Phe Val Leu Pro Asp Leu Thr Leu Ile Thr Lys Glu Glu Leu  
 565 570 575  
 Gly Gly Glu Ile Ile Pro Arg Ser Val Leu Leu Cys Ala Phe Glu Gly  
 580 585 590  
 Ile Ser Tyr Leu Leu Cys Ala Leu Gly Asp Gly His Leu Leu Asn Phe  
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 Gln Leu Asp Thr Ser Cys Gly Lys Leu Arg Asp Arg Lys Lys Val Ser  
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 Leu Gly Thr Arg Pro Ile Thr Leu Arg Thr Phe Ser Ser Lys Ser Ala  
 625 630 635 640  
 Thr His Val Phe Ala Ala Ser Asp Arg Pro Ala Val Ile Tyr Ser Asn  
 645 650 655  
 Asn Lys Lys Leu Leu Tyr Ser Asn Val Asn Leu Lys Glu Val Ser His  
 660 665 670  
 Met Cys Pro Phe Asn Ser Ala Ala Phe Pro Asp Ser Leu Ala Ile Ala

675

680

685

Arg Glu Gly Glu Leu Thr Ile Gly Thr Ile Asp Asp Ile Gln Lys Leu  
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 705 710 715 720  
 Gln Glu Gln Thr Arg Thr Phe Ala Ile Ser Cys Leu Arg Asn Glu Pro  
 725 730 735  
 Ser Ala Glu Glu Ser Glu Ser His Phe Val Arg Leu Leu Asp Ala Gln  
 740 745 750  
 Ser Phe Glu Phe Leu Ser Ser Tyr Pro Leu Asp Ala Phe Glu Cys Gly  
 755 760 765  
 Cys Ser Ile Leu Ser Cys Ser Phe Thr Asp Asp Lys Asn Val Tyr Tyr  
 770 775 780  
 Cys Val Gly Thr Ala Tyr Val Leu Pro Glu Glu Asn Glu Pro Thr Lys  
 785 790 795 800  
 Gly Arg Ile Leu Val Phe Ile Val Glu Glu Gly Arg Leu Gln Leu Ile  
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 Thr Glu Lys Glu Thr Lys Gly Ala Val Tyr Ser Leu Asn Ala Phe Asn  
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 Gly Lys Leu Leu Ala Ser Ile Asn Gln Lys Ile Gln Leu Tyr Lys Trp  
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 Met Leu Arg Asp Asp Gly Thr Arg Glu Leu Gln Ser Glu Cys Gly His  
 850 855 860  
 His Gly His Ile Leu Ala Leu Tyr Val Gln Thr Arg Gly Asp Phe Ile  
 865 870 875 880  
 Ala Val Gly Asp Leu Met Lys Ser Ile Ser Leu Leu Ile Tyr Lys His  
 885 890 895  
 Glu Glu Gly Ala Ile Glu Glu Arg Ala Arg Asp Tyr Asn Ala Asn Trp  
 900 905 910  
 Met Thr Ala Val Glu Ile Leu Asn Asp Asp Ile Tyr Leu Gly Thr Asp  
 915 920 925



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Asn Cys Phe Asn Ile Phe Thr Val Lys Lys Asn Asn Glu Gly Ala Thr  
930 935 940

Asp Glu Glu Arg Ala Arg Met Glu Val Val Gly Glu Tyr His Ile Gly  
945 950 955 960

Glu Phe Val Asn Arg Phe Arg His Gly Ser Leu Val Met Lys Leu Pro  
965 970 975

Asp Ser Asp Ile Gly Gln Ile Pro Thr Val Ile Phe Gly Thr Val Ser  
980 985 990

Gly Met Ile Gly Val Ile Ala Ser Leu Pro Gln Glu Gln Tyr Ala Phe  
995 1000 1005

Leu Glu Lys Leu Gln Thr Ser Leu Arg Lys Val Ile Lys Gly Val  
1010 1015 1020

Gly Gly Leu Ser His Glu Gln Trp Arg Ser Phe Asn Asn Glu Lys  
1025 1030 1035

Arg Thr Ala Glu Ala Lys Gly Tyr Leu Asp Gly Asp Leu Ile Glu  
1040 1045 1050

Ser Phe Leu Asp Leu Ser Arg Gly Lys Met Glu Glu Ile Ser Lys  
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<211> 714

<212> DNA

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tttttcaga gtgacttttg ggagttcttg acattacag ttggtgggc agttcctgac	180
atttggtgac cagttgtagt ctggtgcata tcaaggtcag taagtatggg atgttcactt	240

ccagaaatcg tcccaattgt tgcacatgga atattcatct ggacattttt tgaatacgtt 300  
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 cttattcacg gatgccatca taagcaccg atggaccacc ttcggctcgt ctttcctcct 420  
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 catttgaatc atcacttcag gattcaggac aaaggatttg gtataacttc gtcgttatgg 660  
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<211> 237

<212> PRT

<213> Arabidopsis thaliana

<400> 632

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 20 25 30

Ile Ala Thr Lys Glu Gly Pro Arg Phe Phe Gln Ser Asp Phe Trp Glu  
 35 40 45

Phe Leu Thr Leu Thr Val Trp Trp Ala Val Pro Val Ile Trp Leu Pro  
 50 55 60

Val Val Val Trp Cys Ile Ser Arg Ser Val Ser Met Gly Cys Ser Leu  
 65 70 75 80

Pro Glu Ile Val Pro Ile Val Val Met Gly Ile Phe Ile Trp Thr Phe  
 85 90 95

Phe Glu Tyr Val Leu His Arg Phe Val Phe His Ile Lys Thr Lys Ser  
 100 105 110

Tyr Trp Gly Asn Thr Ala His Tyr Leu Ile His Gly Cys His His Lys  
 115 120 125

His Pro Met Asp His Leu Arg Leu Val Phe Pro Pro Thr Ala Thr Ala  
 130 135 140

Ile Leu Cys Phe Pro Phe Trp Asn Ile Ala Lys Ala Ile Ser Thr Pro  
145 150 155 160

Ser Thr Ala Pro Ala Leu Phe Gly Gly Gly Met Leu Gly Tyr Val Met  
165 170 175

Tyr Asp Val Thr His Tyr Tyr Leu His His Ala Gln Pro Thr Arg Pro  
180 185 190

Val Thr Lys Asn Leu Lys Lys Tyr His Leu Asn His His Phe Arg Ile  
195 200 205

Gln Asp Lys Gly Phe Gly Ile Thr Ser Ser Leu Trp Asp Ile Val Phe  
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Gly Thr Leu Pro Thr Thr Lys Ala Pro Arg Lys Glu Gln  
225 230 235

<210> 633

<211> 717

<212> DNA

<213> Arabidopsis thaliana

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<210> 634

&lt;211&gt; 238

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 634

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 20 25 30

Val His Val Ile Met Gly Pro Met Phe Ser Gly Lys Ser Thr Ser Leu  
 35 40 45

Leu Arg Arg Ile Lys Ser Glu Ile Ser Asp Gly Arg Ser Val Ala Met  
 50 55 60

Leu Lys Ser Ser Lys Asp Thr Arg Tyr Ala Lys Asp Ser Val Val Thr  
 65 70 75 80

His Asp Gly Ile Gly Phe Pro Cys Trp Ala Leu Pro Asp Leu Met Ser  
 85 90 95

Phe Pro Glu Lys Phe Gly Leu Asp Ala Tyr Asn Lys Leu Asp Val Ile  
 100 105 110

Gly Ile Asp Glu Ala Gln Phe Phe Gly Asp Leu Tyr Glu Phe Cys Cys  
 115 120 125

Lys Val Ala Asp Asp Asp Gly Lys Ile Val Ile Val Ala Gly Leu Asp  
 130 135 140

Gly Asp Tyr Leu Arg Arg Ser Phe Gly Ala Val Leu Asp Ile Ile Pro  
 145 150 155 160

Ile Ala Asp Ser Val Thr Lys Leu Thr Ala Arg Cys Glu Val Cys Gly  
 165 170 175

His Lys Ala Phe Phe Thr Leu Arg Lys Asn Cys Asp Thr Arg Thr Glu  
 180 185 190

Leu Ile Gly Gly Ala Asp Val Tyr Met Pro Val Cys Arg Lys His Tyr  
 195 200 205

Ile Thr Asn His Ile Val Ile Lys Ala Ser Lys Lys Val Leu Glu Asp  
 210 215 220

Ser Asp Lys Ala Arg Ala Glu Ser Cys Val Ala Ala Thr Ile  
 225 230 235

<210> 635

<211> 1206

<212> DNA

<213> *Arabidopsis thaliana*

<400> 635

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&lt;211&gt; 401

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 636

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50 55 60Gln Val Ser Lys Ala Leu Arg Glu Ala Gly Leu Glu Ser Ser Asn Leu  
65 70 75 80Ile Leu Gly Val Asp Phe Thr Lys Ser Asn Glu Trp Thr Gly Lys Thr  
85 90 95Ser Phe Asp Gly Lys Cys Leu His Ala Leu Gly Glu Thr Ser Asn Pro  
100 105 110Tyr Glu Lys Ala Ile Phe Val Ile Gly Gln Thr Leu Ala Pro Phe Asp  
115 120 125Glu Asp Asn Leu Ile Pro Cys Phe Gly Phe Gly Asp Ser Thr Thr His  
130 135 140Asp Glu Glu Val Phe Gly Phe His Ser Asp Asn Ser Pro Cys His Gly  
145 150 155 160Phe Glu Glu Val Leu Ala Cys Tyr Lys Arg Ile Ala Pro Asn Leu Arg  
165 170 175Leu Ser Gly Pro Thr Ser Tyr Gly Pro Leu Ile Asp Ala Ala Val Asp  
180 185 190Ile Val Glu Lys Asn Asn Gly Gln Phe His Val Leu Val Ile Val Ala  
195 200 205

Asp Gly Gln Val Thr Arg Gly Thr Asp Met Ala Glu Gly Glu Leu Ser  
 210 215 220

Gln Gln Glu Lys Thr Thr Ile Asp Ala Ile Val Asn Ala Ser Ser Tyr  
 225 230 235 240

Ala Leu Ser Ile Val Leu Val Gly Val Gly Asp Gly Pro Trp Glu Asp  
 245 250 255

Met Arg Lys Phe Asp Asp Lys Ile Pro Lys Arg Glu Phe Asp Asn Phe  
 260 265 270

Gln Phe Val Asn Phe Thr Glu Ile Met Thr Arg Asn Ser Pro Glu Ser  
 275 280 285

Ala Lys Glu Thr Ala Phe Ala Leu Ala Ala Leu Met Glu Ile Pro Phe  
 290 295 300

Gln Tyr Gln Ala Ala Ile Glu Leu Arg Leu Leu Gly Lys Gln Thr Gly  
 305 310 315 320

Leu Ala Lys Thr Ile Val Pro Arg Pro Pro Pro Ile Pro Tyr Thr Pro  
 325 330 335

Pro Thr Asn Ala Glu Leu Pro Ser Thr Ala Ser Pro Ala Ser Pro Glu  
 340 345 350

Gln Thr Gln Ser Cys Pro Ile Cys Leu Thr Asn Arg Lys Asp Val Ala  
 355 360 365

Phe Ser Cys Gly His Met Thr Cys Gly Asp Cys Gly Ser Lys Ile Ser  
 370 375 380

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<211> 1539

<212> DNA

<213> Arabidopsis thaliana

<400> 637

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&lt;210&gt; 638

&lt;211&gt; 512

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana



&lt;400&gt; 638

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Ala Asp Val Asp Ala Pro Pro Lys Ser Thr Gly Gly Trp Gly Trp Gly  
 35 40 45

Phe Ser Gly Phe Ser Val Leu Ser Asp Leu Gln Lys Ala Ala Glu Asp  
 50 55 60

Ile Ser Arg Asn Ala Ala Val Ala Glu Lys Ala Ala Lys Ser Ile  
 65 70 75 80

Ala Glu Met Gly Glu Val Asp Glu Asp Ser Glu Ser Ser Ala Lys Glu  
 85 90 95

Glu Glu Lys Thr Glu Glu Ala Asp Thr Glu Gln Asp Ser Asp Asp Glu  
 100 105 110

Asn Ala Lys Leu Lys Lys Ser Ala Leu Glu Arg Leu Glu Gly Ala Ser  
 115 120 125

Glu Glu Ser Leu Leu Ser Gln Gly Leu Lys Val Phe Asp Asp Ser Val  
 130 135 140

Glu Ser Phe Thr Ser Gly Ala Trp Gln Ala Phe Gly Asn Ala Leu Lys  
 145 150 155 160

Gly Gly Thr Ser Leu Val Gln Lys Leu Glu Asn Ser Val Gln Gln Gly  
 165 170 175

Ser Ser Pro Arg Glu Ala Gly Ser Gly Ala Pro Ser Leu Leu Thr  
 180 185 190

Gly Lys Ala Leu Thr Ala Lys Gly Met Gln Val Leu Glu Phe Val Gly  
 195 200 205

Lys Glu Thr Met Asp Leu Leu Ile Thr Glu Thr Gly Ile Gly Ala Glu  
 210 215 220

Lys Asp Arg Val Asp Phe Lys Asp Gln Val Leu Glu Glu Val Thr Phe  
 225 230 235 240

Asp Arg Cys Phe Tyr Ile Tyr Gly Gly Pro Glu Gln Leu Glu Glu Leu  
 Page 1003

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<213> Arabidopsis thaliana

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Glu Ser Asn Gly Glu Ile Arg Ser Asp Pro Asn Leu Ser Phe Glu His  
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225 230 235 240

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 Page 1009

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Gly Pro Leu Tyr Phe Lys Lys Ala Ile Asp Glu Ala Glu Ser Glu Trp  
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Leu Asp Lys Gly Phe Val His Val Ile Asp Asp Glu Gln Gln Phe Asn  
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<213> Arabidopsis thaliana

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ttacctccga	agtcacattga	gttgagaaaa	gtggatttca	ctgtggagga	acgtgatttc	2760
tactccaaac	tagaggctga	atctcgtact	caattcaggg	aatatgcaga	agctggaaca	2820
gtgaagcaaa	attatgtaaa	tatcttggtg	atgctcttgc	gccttcgcca	agcttggtgat	2880
caccctcttc	tcgtgaatgg	tgaatacagt	tttacctggg	aatcttctgt	tggattagct	2940
aagaagcaga	ttcagtcaga	cgcttcattg	gcaattttgtg	gtatctgcaa	tgatgcacct	3000

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gaagatgctg ttgcttcagt ttgcgggtcat gttttctgta aacagtgcac ttatgaacgc 3060
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&lt;210&gt; 646

&lt;211&gt; 1287

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 646

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Met Gly Glu Glu Gly Ser Met Phe Gly Leu Gly Gly Glu Phe Pro Val
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Asp Asp Cys Asp Gly Gly Phe Glu Phe Glu Asp Asp Asp Glu Thr Ile
20           25           30

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Asp Ile Glu Thr Leu Tyr Arg Ile Leu Asp Glu Lys Pro Asp Ser Ala
35           40           45

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Glu Val Val Phe Ser Ala Phe Val Gly Ser Gln Glu Asn Leu Ser Pro
50           55           60

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Val Gly Ser Ser Ala Asp Glu Leu Lys Asp Ser Gln Leu Leu Asn Gly
65           70           75           80

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047-E2F-PCT.ST25.txt

Ser Phe Asp Glu His Val Lys Met Glu Ala Gly Leu Ser Pro Ser Pro  
85 90

Ala His Thr Cys Ser Ala Ser Leu Lys Asp Trp Phe Ser Leu Ser Gln  
100 105 110

Gly Glu Gln Pro Val Glu Thr Cys Gly Val Ser Gln Ser Glu Met Thr  
115 120 125

Ser Cys Ser Ile Ser Ser Ser Phe Ser Asp Pro Asp Gly Asn Met Met  
130 135 140

Ala Phe Asn Pro Val Asn Cys Asp Val Asp Thr Val Ser Lys Gln Asp  
145 150 155 160

Asp Lys Ile Ile Asp Ser Lys Ser Met Leu Thr Pro Tyr Phe Asp Asn  
165 170 175

Val Thr Gly Tyr Gly Val Gly Leu Gly Ala Asn His Asn Ser Ser Ala  
180 185 190

Met Ser Val Phe Phe Asn Asn Ser Asn Ser Leu Ser Asp Ser Ala Asp  
195 200 205

Asn Tyr Val Ser Ser Ala Gln Asp Cys Tyr Asn Thr Ser Gly Thr Ser  
210 215 220

Leu Ser Asp His Thr Pro Asn Ser Val Gln Asn Phe Ala Phe Glu Phe  
225 230 235 240

Phe Pro Asn Lys Glu Glu Ala Val Asn Asp Val Glu Ser Gly Val Ser  
245 250 255

Glu Ser Gln Ser Asp Gly Ala Ser Arg Met Ile Phe Asp Arg His Gly  
260 265 270

Arg Val Asp Asn Gly Ser Leu Glu Arg Lys Pro Pro Ile Asp Phe Ser  
275 280 285

Ser Ala Arg Gly Ile Ser Phe Lys Phe Glu Ser Asn Pro Ser Val Ser  
290 295 300

Pro Ala Cys Val Lys Pro Tyr Asn Ser Phe Asp Ser His Leu Ala Asp  
305 310 315 320

Ser Asp Leu Asp Arg Pro Asn Asn Tyr Ser Cys Ser Phe Gln Asp Asn  
325 330 335

047-E2F-PCT.ST25.txt

Lys Thr Val His Val Lys Val Lys Pro Glu Ala Glu Ser Glu Lys Val  
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 Val Tyr Ser Ser Val Pro Gly Glu Phe Ser Val Arg Asp Asp Ala Tyr  
 355 360 365  
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 370 375 380  
 Val Ser Tyr Gln Thr Asp Ile Glu Lys Gly Tyr Ser Tyr Met Ala Pro  
 385 390 395 400  
 Gln Thr Ala Leu Pro Ser Gln Asp Ser Gly Lys Ile Ser Ser Asn His  
 405 410 415  
 Phe Tyr Asp Ser Asp Thr Cys Leu Gln Tyr Val Val Glu Asp Pro Ser  
 420 425 430  
 Pro Val Thr Gln Asn Asn Glu Tyr Lys Asp Phe Gln Ile Gln Gln Gly  
 435 440 445  
 Asp Arg Glu Tyr Ile Gln Pro Arg Gly Ile Asp Ser Gln Phe Ser Asn  
 450 455 460  
 Ala Ser Phe Glu Ser Val Gln Ser His Ser Ser Glu Cys Ile Ser Asp  
 465 470 475 480  
 Ser Asp Asp Asp Ser Asp Val Cys Ile Ile Glu Pro Tyr Gly Gln Ser  
 485 490 495  
 Ala Ile Pro His Arg Pro Leu Ala Met Lys Met Pro Val Val Ser Ser  
 500 505 510  
 Glu Tyr Ser Thr Val Ser His Asn Phe Asn Gln Ser Gly Gly Leu Lys  
 515 520 525  
 Leu Gln Ser Asn Lys Glu Asn Met Ile Phe Gln Ala Ala Leu Gln Asp  
 530 535 540  
 Leu Thr Gln Pro Asn Ser Glu Ala Ile Leu Pro Asp Gly Val Leu Thr  
 545 550 555 560  
 Val Pro Leu Leu Arg His Gln Arg Ile Ala Leu Ser Trp Met Ala Gln  
 565 570 575  
 Lys Glu Thr Ser Gly Phe Pro Cys Ser Gly Gly Ile Leu Ala Asp Asp  
 580 585 590



047-E2F-PCT.ST25.txt

Gln Gly Leu Gly Lys Thr Val Ser Thr Ile Ala Leu Ile Leu Lys Glu  
595 600 605

Arg Ser Lys Pro Ala Gln Ala Cys Glu Glu Ser Thr Lys Lys Glu Ile  
610 615 620

Phe Asp Leu Glu Ser Glu Thr Gly Glu Cys Ala Pro Leu Lys Pro Ser  
625 630 635 640

Gly Arg Ser Lys His Phe Glu His Ser Gln Leu Leu Ser Asn Glu Asn  
645 650 655

Lys Val Gly Gly Asp Ser Val Gly Lys Val Thr Gly Arg Pro Ala Ala  
660 665 670

Gly Thr Leu Val Val Cys Pro Thr Ser Val Met Arg Gln Trp Ala Asp  
675 680 685

Glu Leu His Lys Lys Val Thr Ser Glu Ala Asn Leu Ser Val Leu Val  
690 695 700

Tyr His Gly Ser Ser Arg Thr Lys Asp Pro His Glu Leu Ala Lys Tyr  
705 710 715 720

Asp Val Val Val Thr Thr Phe Ser Ile Val Ser Met Glu Val Pro Lys  
725 730 735

Gln Pro Leu Val Asp Asp Glu Asp Glu Glu Lys Asp Gly Val His Asp  
740 745 750

Gly Gly Thr Ala Ala Thr Gly Phe Cys Ser Asn Lys Lys Arg Lys Tyr  
755 760 765

Pro Pro Asp Ser Lys Lys Lys Gly Ser Lys Lys Lys Lys Val Glu Phe  
770 775 780

Leu Ser Gly Pro Leu Ala Lys Val Ser Trp Phe Arg Val Val Leu Asp  
785 790 795 800

Glu Ala Gln Ser Ile Lys Asn Tyr Lys Thr Gln Val Ala Arg Ala Cys  
805 810 815

Trp Gly Leu Arg Ala Lys Arg Arg Trp Cys Leu Ser Gly Thr Pro Ile  
820 825 830

Gln Asn Ser Ile Asp Asp Leu Tyr Ser Tyr Phe Arg Phe Leu Lys Tyr

835 047-E2F-PCT.ST25.txt  
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 Asp Pro Tyr Ser Ser Tyr Val Leu Phe Cys Ser Thr Ile Lys Asn Pro  
 850 855 860  
 Ile Thr Arg Asn Pro Val Lys Gly Tyr Gln Lys Leu Gln Ala Ile Leu  
 865 870 875 880  
 Lys Thr Val Met Leu Arg Arg Thr Lys Gly Ser Leu Leu Asp Gly Lys  
 885 890 895  
 Pro Ile Ile Ser Leu Pro Pro Lys Ser Ile Glu Leu Arg Lys Val Asp  
 900 905 910  
 Phe Thr Val Glu Glu Arg Asp Phe Tyr Ser Lys Leu Glu Ala Glu Ser  
 915 920 925  
 Arg Thr Gln Phe Arg Glu Tyr Ala Glu Ala Gly Thr Val Lys Gln Asn  
 930 935 940  
 Tyr Val Asn Ile Leu Leu Met Leu Leu Arg Leu Arg Gln Ala Cys Asp  
 945 950 955 960  
 His Pro Leu Leu Val Asn Gly Glu Tyr Ser Phe Thr Trp Glu Ser Ser  
 965 970 975  
 Val Gly Leu Ala Lys Lys Gln Ile Gln Ser Asp Ala Ser Leu Ala Ile  
 980 985 990  
 Cys Gly Ile Cys Asn Asp Ala Pro Glu Asp Ala Val Ala Ser Val Cys  
 995 1000 1005  
 Gly His Val Phe Cys Lys Gln Cys Ile Tyr Glu Arg Leu Thr Gly  
 1010 1015 1020  
 Asp Ser Asn His Cys Pro Phe Ala Asn Cys Asn Val Arg Leu Thr  
 1025 1030 1035  
 Ile Ser Ser Leu Ser Ser Lys Thr Arg Leu Asp Asp Ala Met Pro  
 1040 1045 1050  
 Asp Met Gln Glu Arg Ala Thr Ser Asn Ser Leu Ser Pro Cys Ser  
 1055 1060 1065  
 Asp Glu Asp Leu Pro Tyr Gly Ser Ser Lys Ile Lys Ala Ala Leu  
 1070 1075 1080

Glu Ile Leu Gln Ser Leu Pro Lys Ala His Asp Leu Thr Asp Ser  
1085 1090 1095

Asn Gln Ile Ser Glu Asn Arg Glu Tyr Ser Gly Leu Ser Ile Thr  
1100 1105 1110

Pro Val Lys Asn Glu Gly Met Ser Val Asp Val Pro Ile Lys Val  
1115 1120 1125

Ala Gly Glu Lys Ala Ile Val Phe Ser Gln Trp Thr Lys Met Leu  
1130 1135 1140

Asn Leu Leu Glu Ala Ser Leu Val Ser Ser His Ile Gln Tyr Arg  
1145 1150 1155

Arg Leu Asp Gly Thr Met Ser Val Ala Ala Arg Asp Lys Ala Val  
1160 1165 1170

Gln Asp Phe Asn Thr Leu Pro Glu Val Thr Val Met Ile Met Ser  
1175 1180 1185

Leu Lys Ala Ala Ser Leu Gly Leu Asn Met Val Ala Ala Cys His  
1190 1195 1200

Val Leu Met Leu Asp Leu Trp Trp Asn Pro Thr Thr Glu Asp Gln  
1205 1210 1215

Ala Ile Asp Arg Ala His Arg Ile Gly Gln Thr Arg Pro Val Thr  
1220 1225 1230

Val Val Arg Phe Thr Val Lys Asp Thr Val Glu Asp Arg Ile Leu  
1235 1240 1245

Ala Leu Gln Gln Lys Lys Arg Met Met Val Ala Ser Ala Phe Gly  
1250 1255 1260

Glu Asp Glu Lys Gly Ser Arg Gln Ser His Leu Thr Val Glu Asp  
1265 1270 1275

Leu Ser Tyr Leu Phe Met Ala Asp Ser  
1280 1285

<210> 647

<211> 990

<212> DNA

<213> Arabidopsis thaliana

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gtatctgcac tatggcgtga gaatttcgga ggatctgac ttccaccacc tccaatgtat    180
actttggatg accggtccga tttctctcct gagtctggta ttgcagacta ctctgcgtct    240
ccagatgcta agtctgacag aagaacacca ttccagagtt ctggaaagaa tattgtaact    300
cctggtaaag gaaagtgtga agcaagccct tctttttctc tactgaatgc acaacagagt    360
cagcaagttt cagggagtcc gagtgtgtgg tcgcagtcaa aggcaggtag tagtaccgag    420
cagatgataa aagggaaagg atctcctgta gaagggtggg ttcagccagg tgcattggtc    480
actcttcctc cgccaagaga agttgctagg ccagagggtc agaggcagat tatacctaca    540
ggaaaccttg atgaggaaga gtgggtcact gtctatggat tttctccagg tgatacaaat    600
ttagtactac gggagtgtga aaaatgtggt atggtcttga aacatgttcc tggccaaga    660
aatgccaaat ggatgcacat cctctaccag aaccggtctg atgcacataa ggcgctgaac    720
aaagcagggg tgatgataaa cggagtgtga atagtaggag tgaagccagt agaccaata    780
cagaagcaag cgttaaacga gagactcaac aaccaaggat tcatgccttt acctccacca    840
tcatccacta gaaacactgc tcgacccctg tctcgtcctc agtacttgca aaacggcagc    900
gctttctctc ctcaaccaag tgggtggcgt atggcctctc cgtaaaagtc aatggtctca    960
aagttctttg acttgatggt cgggtgtttaa    990

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<210> 648

<211> 329

<212> PRT

<213> *Arabidopsis thaliana*

<400> 648

Met Ser Ala Ala Ala His Arg Thr Pro Lys Ser Gly Arg Gln Ser Leu  
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Leu Phe Gln Asp Leu Ala Ser Pro Val Ser Ala Arg Arg Gly Lys Phe  
20 25 30

Ser Ser Pro Gly Gln Ala Ala Ala Val Ser Ala Leu Trp Arg Glu Asn  
35 40 45

047-E2F-PCT.ST25.txt

Phe Gly Gly Ser Asp Leu Pro Pro Pro Pro Met Tyr Thr Leu Asp Asp  
 50 55 60  
 Arg Ser Asp Phe Ser Pro Glu Ser Gly Ile Ala Asp Tyr Ser Ala Ser  
 65 70 75 80  
 Pro Asp Ala Lys Ser Asp Arg Arg Thr Pro Phe Gln Ser Ser Gly Lys  
 85 90 95  
 Asn Ile Val Thr Pro Gly Lys Gly Lys Leu Glu Ala Ser Pro Ser Phe  
 100 105 110  
 Ser Leu Leu Asn Ala Gln Gln Ser Gln Gln Val Ser Gly Ser Pro Ser  
 115 120 125  
 Trp Trp Ser Gln Ser Lys Ala Gly Ser Ser Thr Glu Gln Asp Asp Lys  
 130 135 140  
 Gly Lys Gly Ser Pro Val Glu Gly Val Val Gln Pro Gly Ala Leu Val  
 145 150 155 160  
 Thr Leu Pro Pro Pro Arg Glu Val Ala Arg Pro Glu Val Gln Arg Gln  
 165 170 175  
 Ile Ile Pro Thr Gly Asn Leu Asp Glu Glu Glu Trp Val Thr Val Tyr  
 180 185 190  
 Gly Phe Ser Pro Gly Asp Thr Asn Leu Val Leu Arg Glu Phe Glu Lys  
 195 200 205  
 Cys Gly Met Val Leu Lys His Val Pro Gly Pro Arg Asn Ala Asn Trp  
 210 215 220  
 Met His Ile Leu Tyr Gln Asn Arg Ser Asp Ala His Lys Ala Leu Asn  
 225 230 235 240  
 Lys Ala Gly Met Met Ile Asn Gly Val Val Ile Val Gly Val Lys Pro  
 245 250 255  
 Val Asp Pro Ile Gln Lys Gln Ala Leu Asn Glu Arg Leu Asn Asn Gln  
 260 265 270  
 Gly Phe Met Pro Leu Pro Pro Pro Ser Ser Thr Arg Asn Thr Ala Arg  
 275 280 285  
 Pro Leu Ser Arg Pro Gln Tyr Leu Gln Asn Gly Ser Ala Phe Ser Pro  
 290 295 300

047-E2F-PCT.ST25.txt

Gln Pro Ser Gly Gly Ala Met Ala Ser Pro Ser Lys Ser Met Val Ser  
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Lys Phe Phe Asp Leu Met Phe Gly Val  
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<210> 649

<211> 1488

<212> DNA

<213> Arabidopsis thaliana

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ataacaattg tcacgacgcc tcacaatgca gcgaggttca agaatgtcct aaaccgtgcc 180  
attgagtctg gcttgcccat caacttagtg caagtcaagt ttccatatct agaagctggt 240  
ttgcaagaag gacaagagaa tatcgattct cttgacacaa tggagcggat gatacctttc 300  
tttaaagcgg ttaactttct cgaagaacca gtccagaagc tcattgaaga gatgaaccct 360  
cgaccaagct gtctaatttc tgatttttgt ttgccttata caagcaaat cgccaagaag 420  
ttcaatatcc caaagatcct ctccatggc atgggttgct ttgtcttct gtgtatgcat 480  
gttttacgca agaaccgtga gatcttgga aatttaaagt cagataagga gcttttctact 540  
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gttcacagct gagactggaa agatatcttt gatggtatgg tagaagcgaa tgagacatct 660  
tatggtgtga tcgtcaactc atttcaagag ctgcagcctg cttatgcaa agactacaag 720  
gaggttaagg ccggttaaac atggaccatt ggaccctgtt ctttgtgcaa caaggtagga 780  
gccgacaaag cagagagggg aaacaaatca gacattgatc aagatgagtg ccttaaatgg 840  
ctcgattcta agaacaatgg ctcggtgctt tacgtttgtc ttggaagtat ctgtaattct 900  
cctttgtctc aactcaagga gctgggacta ggccctagagg aatcccaag acccttcatt 960  
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aatgagaaat tggctgttga ggtactaaaa gccggtgtaa gatccggggg tgaacagcct 1260  
atgaaatggg gagaagagga gaaaatagga gtgttggtgg ataaagaagg agtgaagaag 1320

047-E2F-PCT.ST25.txt

gcagtggaag aattaatggg tgagagtgat gatgcaaaag agagaagaag aagagccaaa 1380  
gagcttgagg attcagctca caaggctgtg gaagaaggag gctcttctca ttctaacatc 1440  
tctttcttgc tacaagacat aatggaactg gcagaacca ataattga 1488

<210> 650

<211> 495

<212> PRT

<213> Arabidopsis thaliana

<400> 650

Met Val Ser Glu Thr Thr Lys Ser Ser Pro Leu His Phe Val Leu Phe  
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Pro Phe Met Ala Gln Gly His Met Ile Pro Met Val Asp Ile Ala Arg  
20 25 30

Leu Leu Ala Gln Arg Gly Val Ile Ile Thr Ile Val Thr Thr Pro His  
35 40 45

Asn Ala Ala Arg Phe Lys Asn Val Leu Asn Arg Ala Ile Glu Ser Gly  
50 55 60

Leu Pro Ile Asn Leu Val Gln Val Lys Phe Pro Tyr Leu Glu Ala Gly  
65 70 75 80

Leu Gln Glu Gly Gln Glu Asn Ile Asp Ser Leu Asp Thr Met Glu Arg  
85 90 95

Met Ile Pro Phe Lys Ala Val Asn Phe Leu Glu Glu Pro Val Gln  
100 105 110

Lys Leu Ile Glu Glu Met Asn Pro Arg Pro Ser Cys Leu Ile Ser Asp  
115 120 125

Phe Cys Leu Pro Tyr Thr Ser Lys Ile Ala Lys Lys Phe Asn Ile Pro  
130 135 140

Lys Ile Leu Phe His Gly Met Gly Cys Phe Cys Leu Leu Cys Met His  
145 150 155 160

Val Leu Arg Lys Asn Arg Glu Ile Leu Asp Asn Leu Lys Ser Asp Lys  
165 170 175

047-E2F-PCT.ST25.txt

Glu Leu Phe Thr Val Pro Asp Phe Pro Asp Arg Val Glu Phe Thr Arg  
 180 185 190  
 Thr Gln Val Pro Val Glu Thr Tyr Val Pro Ala Gly Asp Trp Lys Asp  
 195 200 205  
 Ile Phe Asp Gly Met Val Glu Ala Asn Glu Thr Ser Tyr Gly Val Ile  
 210 215 220  
 Val Asn Ser Phe Gln Glu Leu Glu Pro Ala Tyr Ala Lys Asp Tyr Lys  
 225 230 235 240  
 Glu Val Arg Ser Gly Lys Ala Trp Thr Ile Gly Pro Val Ser Leu Cys  
 245 250 255  
 Asn Lys Val Gly Ala Asp Lys Ala Glu Arg Gly Asn Lys Ser Asp Ile  
 260 265 270  
 Asp Gln Asp Glu Cys Leu Lys Trp Leu Asp Ser Lys Lys His Gly Ser  
 275 280 285  
 Val Leu Tyr Val Cys Leu Gly Ser Ile Cys Asn Leu Pro Leu Ser Gln  
 290 295 300  
 Leu Lys Glu Leu Gly Leu Gly Leu Glu Glu Ser Gln Arg Pro Phe Ile  
 305 310 315 320  
 Trp Val Ile Arg Gly Trp Glu Lys Tyr Lys Glu Leu Val Glu Trp Phe  
 325 330 335  
 Ser Glu Ser Gly Phe Glu Asp Arg Ile Gln Asp Arg Gly Leu Leu Ile  
 340 345 350  
 Lys Gly Trp Ser Pro Gln Met Leu Ile Leu Ser His Pro Ser Val Gly  
 355 360 365  
 Gly Phe Leu Thr His Cys Gly Trp Asn Ser Thr Leu Glu Gly Ile Thr  
 370 375 380  
 Ala Gly Leu Pro Leu Leu Thr Trp Pro Leu Phe Ala Asp Gln Phe Cys  
 385 390 395 400  
 Asn Glu Lys Leu Val Val Glu Val Leu Lys Ala Gly Val Arg Ser Gly  
 405 410 415  
 Val Glu Gln Pro Met Lys Trp Gly Glu Glu Glu Lys Ile Gly Val Leu  
 420 425 430



Val Asp Lys Glu Gly Val Lys Lys Ala Val Glu Glu Leu Met Gly Glu  
 435 440 445

Ser Asp Asp Ala Lys Glu Arg Arg Arg Arg Ala Lys Glu Leu Gly Asp  
 450 455 460

Ser Ala His Lys Ala Val Glu Glu Gly Gly Ser Ser His Ser Asn Ile  
 465 470 475 480

Ser Phe Leu Leu Gln Asp Ile Met Glu Leu Ala Glu Pro Asn Asn  
 485 490 495

<210> 651

<211> 1035

<212> DNA

<213> Arabidopsis thaliana

<400> 651  
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 tcatcatcgt ccacgtcgtc tccggctgga aacgcctctg ttctgcattg ccagaaacag 180  
 agatcttctt cttctgggtc gaataatctg acgtattccg cggcttctgg gttgttgttg 240  
 aatcttccgg tggctgcaac ctccggatgg agcggcggcg gtcctttttc cttgtttaat 300  
 tctggaggtt atgatgattt tgagtgggtt tctgaggaag aagatgattc tctgtttggc 360  
 tctgttcctt ctgttgatga agtccaagat gctgtttctg ctctccagca ggttttcgat 420  
 gctagtcatc attcccagct ggttagagac aaatacagat gctatccgga aaatggtggt 480  
 ggaaccaga gccctatagc cacagggatg gttcatcaag ttccttcatt cgggtcggat 540  
 tcggactgga tggagccatc aatgcattta tgccattcaa gaacgttaaa gcctcatgct 600  
 tatgatcagg tttaacaatgc ttttgacctc ctacgaaccg aacctctgtg ccagaaaatg 660  
 gtagtatcat tgcgtctgta caaagcagtt tgggaggcgg tgatgaacaa cgatgtgttg 720  
 cgagagatta gggacttgta caacaatggc ataagtcaag atgaggaaaa ttcagaagac 780  
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 gtttaaggcca cggaaagtgt tgtgaaaata acaaaggctg tgaccgagct cttaattgt 900  
 tacaatggtg atgggtgtta caacaagggg aaagatgcca aattcaacaa ttggctcgag 960  
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cgagcctgca actag

&lt;210&gt; 652

&lt;211&gt; 344

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 652

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 1 5 10 15

Arg Ala Ala Gly Arg Ala Met Thr Arg Thr Gly Val Ala Asn Gly Gly  
 20 25 30

Ile Gln Asp Pro Phe Ala Ser Ser Ser Ser Ser Thr Ser Ser Pro  
 35 40 45

Ala Gly Asn Ala Ser Val Ser His Val Gln Lys Gln Arg Ser Ser Ser  
 50 55 60

Ser Gly Ser Asn Asn Leu Thr Tyr Ser Ala Ala Ser Gly Leu Leu Leu  
 65 70 75 80

Asn Leu Pro Val Ala Ala Thr Ser Gly Trp Ser Gly Gly Gly Pro Phe  
 85 90 95

Ser Phe Val Asn Ser Gly Gly Tyr Asp Asp Phe Glu Trp Val Ser Glu  
 100 105 110

Glu Glu Asp Asp Ser Leu Phe Gly Ser Val Pro Ser Val Asp Glu Val  
 115 120 125

Gln Asp Ala Val Ser Ala Leu Gln Gln Val Phe Asp Ala Ser Ser Tyr  
 130 135 140

Ser Gln Leu Val Arg Asp Lys Tyr Glu Cys Tyr Pro Glu Asn Gly Gly  
 145 150 155 160

Gly Asn Gln Ser Pro Ile Ala Thr Gly Met Val His Gln Val Pro Ser  
 165 170 175

Phe Gly Ser Asp Ser Asp Trp Met Glu Pro Ser Met His Leu Cys His  
 180 185 190

Ser Arg Thr Leu Lys Pro His Ala Tyr Asp Gln Val Tyr Asn Ala Phe  
 195 200 205

Asp Leu Leu Arg Thr Glu Pro Ser Val Gln Lys Met Val Val Ser Leu  
 210 215 220

Ser Ser Asp Lys Ala Val Trp Glu Ala Val Met Asn Asn Asp Val Val  
 225 230 235 240

Arg Glu Ile Arg Asp Leu Tyr Asn Asn Gly Ile Ser Gln Asp Glu Glu  
 245 250 255

Asn Ser Glu Asp Thr Pro Arg Glu Asn Asn Ala Ala Thr Asp Phe Ile  
 260 265 270

Lys Trp Val Phe Asp Asn Thr Met Val Lys Ala Thr Glu Val Phe Val  
 275 280 285

Lys Ile Thr Lys Val Val Thr Glu Leu Phe Asn Cys Tyr Asn Gly Asp  
 290 295 300

Gly Val Asn Asn Lys Gly Lys Asp Ala Lys Phe Asn Asn Trp Leu Glu  
 305 310 315 320

Glu Lys Leu Thr Thr Ser Val Leu Leu Ser Ile Ile Val Met Leu Val  
 325 330 335

Val Met Val Ser Arg Ala Cys Asn  
 340

<210> 653

<211> 6375

<212> DNA

<213> Arabidopsis thaliana

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 caatttatct ttgtgtcaga gttcagggtc ggtcagggtt atgggggtgcc tctctctggt 180  
 tcgcttctat gtaagcctgg atttcagaa caaagggtcat gtggggaggga gacaaagaaa 240  
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<212> PRT

<213> Arabidopsis thaliana

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Arg Ala Gly Gln val Tyr Gly val Pro Leu Ser Gly Ser Leu Leu Cys  
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Lys Pro Gly Phe Pro Glu Gln Arg Ser Cys Gly Glu Glu Thr Lys Lys  
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Arg Trp Ile Glu Ser Leu Ser Gln Gln His Lys Arg Leu Arg Ser Leu  
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Ala Asp Asn Ile Pro Gly Tyr Arg Arg Lys Thr Leu Phe Glu val Leu  
 100 105 110

Ile Arg Asn Asn val Pro Leu Leu Arg Ala Thr Trp Phe Ile Lys val  
 115 120 125

Thr Tyr Leu Asn Gln val His Cys Trp Ala Ile Asn Trp Cys Asp Leu  
 130 135 140

val Leu Leu Leu Phe Leu Gln Glu His Leu Thr Arg His Lys Leu Leu  
 Page 1033

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Gly Val Ser Asn Gly Gln Lys Met Leu Leu Asn Ile Cys Asn Thr Ser  
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Trp Met Asn Phe Cys His Gly Ile Ala His Phe Leu Leu Ser Lys Leu  
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Glu Ile Gly His His Arg Cys Phe Ile Gln Asp Gln Cys Lys Arg Ile  
195                      200                      205

Val Gln His Gln Gln Ala Phe Thr Ala Arg Lys His Leu Tyr Ile Leu  
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Asn Gly Gly Ile Trp Cys Val Phe Tyr Ser Gly Thr Met Leu Lys Gly  
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Phe Phe Phe Leu Ile Ser Leu Leu Ile Gly Phe Ser Ser Ser Tyr Ser  
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Phe Val Asn Phe His Phe Ala Leu Leu Gln Glu Lys Glu Ile Phe Glu  
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Ile Leu Gln Leu Leu Leu Pro Ile Val Tyr Gly Val Leu Glu Ser Ile  
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Val Leu Ser Gln Thr Tyr Val Gln Ser Leu Val Ala Ile Ala Val Arg  
290                      295                      300

Phe Ile Gln Glu Pro Ala Pro Gly Gly Ser Asp Leu Val Asp Asn Ser  
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Arg Arg Ala Tyr Thr Leu Ser Ala Leu Ile Glu Met Val Arg Tyr Leu  
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Val Leu Ala Ala Pro Asp Thr Phe Val Ala Ser Asp Phe Phe Pro Leu  
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Pro Pro Ser Val Ala Ala Cys Gly Pro Asn Asp Val Ser Tyr Thr Ser  
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Lys Ala Tyr Glu Asn Leu Glu Lys Leu Arg Ser Asn Ser Ala Glu Ile  
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Ser Ala Gln Phe Gln Gly Arg Gly Val Leu Ser Arg Phe Glu Phe Leu  
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Tyr Ser Tyr Leu Phe Glu Asp Leu Cys Asn Gly Ala Val Asp Glu Ala  
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Gly Ala Ile Ser Thr Ser Phe Val Cys Ser Val Phe Phe Leu Ile Glu  
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Trp Ala Thr Cys Asp Phe Arg Asp Phe Arg Ala Gly Val Pro Lys Asp  
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Gly Lys Asn Cys Arg Asn Asn Phe Leu Gly Val Ser Lys Pro Ser Gly  
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Ser Met Asp Ala Phe Glu Ser Pro Gly Pro Leu His Asp Ile Ile Val  
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Gln Leu Pro Gly Cys Phe Val His Glu Thr Leu Glu Glu Ala Gln Leu  
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 755 760 765  
 Ser Gly Ser Val Tyr Ser Lys Met Asp Gln Pro Glu Ala Thr Pro Gly  
 770 775 780  
 Cys Glu Asp Cys Arg Arg Ala Lys Arg Pro Lys Met Asn Asp Glu Lys  
 785 790 795 800  
 Ser Ser Cys Tyr Gln Gly Asn Ser Pro Ile Ala Ser Asp Glu Glu Asp  
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 Asn Trp Trp Ile Lys Lys Gly Ser Lys Thr Val Glu Ser Ser Leu Lys  
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 Val Asp Pro Gln Ile Glu Ile Thr Lys Gln Val Pro Arg Gly Arg Gln  
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 Arg Pro Ser Arg Val Gly Leu Ser Met Arg Asp Val Leu Gln Arg  
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 His Val Glu Glu Ala Thr His Tyr Leu Lys Lys Leu Ile Gly Thr  
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1145

1150

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Gln Thr 1190	Gly Gly Ala Ala	Gln 1195	Glu Gly Asp Pro	Ser 1200	Leu Val Ser
Ser Ala 1205	Val Ser Ala Ile	Ile 1210	Asn Ser Val Gly	Leu 1215	Ser Val Ala
Arg Ile 1220	Thr Asp Phe Ser	Leu 1225	Gly Asn Ile Tyr	Gln 1230	Asn His Pro
Ser Gly 1235	Val Asp Ser Ser	Asn 1240	Ile Ala Arg Tyr	Ile 1245	Leu Arg Ile
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Phe Leu 1880 Leu Arg Leu Leu Pro 1885 Val Ile Cys Gly Glu 1890 Pro Ser Phe  
Lys Asn 1895 Thr Arg His Ala Leu 1900 Ala Ser Thr Ile Val 1905 Arg Leu Leu  
Gly Ser 1910 Arg Val Val Tyr Glu 1915 Asp Tyr Ala Val Cys 1920 Ser Pro Arg  
Ser Glu 1925 Leu Ser Lys Ala Glu 1930 Thr Glu Ser Thr Ile 1935 Asp Pro Ser  
Ser Met 1940 Ala Asp Leu Ser Ser 1945 Glu Val Leu Phe Asp 1950 Arg Arg Glu  
Leu Thr 1955 Gly Leu Ser Thr Asn 1960 Phe Lys Lys Ser Leu 1965 Lys Val Cys  
Leu Leu 1970 Gly Cys Lys Asn Glu 1975 Leu Ser Arg Met Gln 1980 Leu Pro Asp  
Thr Ile 1985 Arg Trp Arg Ile Gln 1990 Ala Ala Met Pro Ile 1995 Leu Leu Pro  
Ser Leu 2000 Arg Cys Ser Leu Ser 2005 Cys Gln Pro His Ser 2010 Val Pro Pro  
Thr Ala 2015 Leu Thr Leu Val Gln 2020 Pro Ser Gly Ser Thr 2025 Ala Ala Ala  
Gly Thr 2030 Asn Gln Arg Asn Ser 2035 Pro Ala Ile Ser Lys 2040 Ser Gly Thr  
Ala Ala 2045 Ala Gln Gly Lys Leu 2050 Lys Pro Thr Met Leu 2055 Ala Pro His  
Gln Gln 2060 Gln Glu Ala Asp Asn 2065 Thr Asp Val Val Asp 2070 Pro Trp Thr  
Leu Leu 2075 Glu Asp Gly Thr Ser 2080 Ser Gly Leu Ser Ser 2085 Ser Asn Ala  
Ser Asn Ser Ser Asp Met Ala Asn Leu Arg Ala Thr Cys Trp Leu  
Page 1041

2090

2095

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2105 2110 2115

Ser Val Asp Asp Asp Ser  
2120

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&lt;211&gt; 648

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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&lt;210&gt; 656

&lt;211&gt; 215

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 656

Met Val Leu Lys Val Tyr Gly Pro His Phe Ala Ser Pro Lys Arg Ala  
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Leu Val Thr Leu Ile Glu Lys Gly Val Ala Phe Glu Thr Ile Pro Val  
20 25 30



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Asp Leu Met Lys Gly Glu His Lys Gln Pro Ala Tyr Leu Ala Leu Gln  
35 40 45

Pro Phe Gly Thr Val Pro Ala Val Val Asp Gly Asp Tyr Lys Ile Phe  
50 55 60

Glu Ser Arg Ala Val Met Arg Tyr Val Ala Glu Lys Tyr Arg Ser Gln  
65 70 75 80

Gly Pro Asp Leu Leu Gly Lys Thr Val Glu Asp Arg Gly Gln Val Glu  
85 90 95

Gln Trp Leu Asp Val Glu Ala Thr Thr Tyr His Pro Pro Leu Leu Asn  
100 105 110

Leu Thr Leu His Ile Met Phe Ala Ser Val Met Gly Phe Pro Ser Asp  
115 120 125

Glu Lys Leu Ile Lys Glu Ser Glu Glu Lys Leu Ala Gly Val Leu Asp  
130 135 140

Val Tyr Glu Ala His Leu Ser Lys Ser Lys Tyr Leu Ala Gly Asp Phe  
145 150 155 160

Val Ser Leu Ala Asp Leu Ala His Leu Pro Phe Thr Asp Tyr Leu Val  
165 170 175

Gly Pro Ile Gly Lys Ala Tyr Met Ile Lys Asp Arg Lys His Val Ser  
180 185 190

Ala Trp Trp Asp Asp Ile Ser Ser Arg Pro Ala Trp Lys Glu Thr Val  
195 200 205

Ala Lys Tyr Ser Phe Pro Ala  
210 215

<210> 657

<211> 2055

<212> DNA

<213> Arabidopsis thaliana

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<211> 684

<212> PRT

<213> Arabidopsis thaliana

<400> 658

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 35 40 45

His Ser Pro Ala Arg Ser Ala Cys Leu Thr Thr Ser Leu Ser Arg Arg  
 50 55 60

Leu Arg Thr Ser Gly Ser Leu Lys Asn Ala Ser Ala Gly Val Leu Asn  
 65 70 75 80

Ser Pro Met Phe Gly Ala Asn Gly Gly Arg Lys Arg Ser Gly Ser Gly  
 85 90 95

Tyr Glu Asn Ser Asn Asn Asn Asn Asn Asn Ile Glu Pro Ser Ser  
 100 105 110

Pro Lys Val Thr Cys Ile Gly Gln Val Arg Val Lys Thr Arg Lys His  
 115 120 125

Val Lys Lys Lys Met Arg Ala Arg Ser Arg Arg Lys Gly Gly Glu Asn  
 130 135 140

Ser Phe Arg Arg Ser Val Asp Gln Asn Asp Gly Gly Gly Gly Cys Arg  
 145 150 155 160

Phe Lys Ala Ser Glu Asn Arg Leu Val His Leu Pro Val Thr Ile Cys  
 165 170 175

Glu Ser Leu Arg Ser Phe Gly Ser Glu Leu Asn Cys Phe Phe Pro Cys  
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Arg Ser Ser Cys Thr Glu Asn Ser His Gly Asp Gly Arg Arg Ala Glu  
 195 200 205  
 Ser Asn Asn Asp Gly Cys Gly Gly Gly Gly Gly Gly Ser Asn Ser Cys  
 210 215 220  
 Gly Ala Val Phe Thr Arg Trp Phe Val Ala Val Glu Glu Thr Ser Gly  
 225 230 235 240  
 Gly Lys Arg Arg Glu Ile Glu Leu Val Val Gly Gly Glu Asp Glu Val  
 245 250 255  
 Glu Glu Asp Arg Arg Arg Ser Arg Arg His Val Phe Glu Gly Leu  
 260 265 270  
 Asp Leu Ser Glu Ile Glu Met Lys Thr Glu Lys Lys Glu Arg Gly Glu  
 275 280 285  
 Glu Val Gly Arg Met Ser Ile Cys Ser Pro Pro Lys Asn Ala Leu Leu  
 290 295 300  
 Leu Met Arg Cys Arg Ser Asp Pro Val Lys Val Ala Ala Leu Ala Asn  
 305 310 315 320  
 Arg Val Arg Glu Arg Gln Leu Ser Leu Asn Asp Gly Val Tyr Thr Glu  
 325 330 335  
 Glu Glu Glu Asp Glu Arg Arg Arg Arg Phe Glu Leu Glu Ile Glu Asp  
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 Lys Lys Arg Ile Asp Leu Cys Glu Lys Trp Ile Ser Gly Glu Thr Thr  
 355 360 365  
 Val Glu Thr Glu Glu Val Ser Val Ala Val Ala Glu Ala Glu Ala Glu  
 370 375 380  
 Ala Glu Ala Glu Ala Pro Leu Pro Ser Asn Pro Ala Thr Glu Glu Glu  
 385 390 395 400  
 Glu Arg Val Lys Val Val Glu Asp Ser Ile Val Glu Glu Glu Gln Glu  
 405 410 415  
 Ala Ser Lys Ile Leu Asp Ser Phe Glu Glu Glu Ile Glu Ala Thr Ile  
 420 425 430

047-E2F-PCT.ST25.txt

Met Lys Lys Ile Glu Asp Glu Ile Arg Asn Ala Ile Glu Glu Glu Glu  
435 440 445

Lys Leu Ala Glu Met Glu Glu Leu Ala Val Val Ala Val Ala Glu Thr  
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Glu Glu Val Glu Glu Ser Lys Glu Val Val Pro Asp Cys Ile Pro Gln  
465 470 475 480

Asn Glu Glu Arg Ser Glu Gln Gly Asn Arg Glu Pro Asp Pro Ser Pro  
485 490 495

Glu Val Val Met Arg Arg Ser Leu Gln Glu Glu Thr Thr Glu Lys Glu  
500 505 510

Lys Thr Thr Ala Thr Pro Tyr Lys Val Leu Pro Asp Cys Leu Leu Leu  
515 520 525

Met Met Cys Glu Pro Lys Leu Ser Met Glu Val Ser Lys Glu Thr Trp  
530 535 540

Val Cys Ser Thr Asp Phe Val Arg Cys Leu Pro Gly Arg Pro Pro Ala  
545 550 555 560

Lys Lys Ile Pro Pro Glu Ala Val Gly Asp Asn His His His His Gln  
565 570 575

Pro Lys Lys Arg Ile Val Thr Ala Val Asp Ser Asn Ala Ser Ser Arg  
580 585 590

Arg Arg Ser Ile Asp Arg Pro Pro Leu His Leu Gln Pro Pro Arg Ser  
595 600 605

Ser Cys Ser Tyr Pro Ala Ala Pro Pro Ile Ile Thr Ala Ala Ala Ala  
610 615 620

Val Gly Glu Gln Arg Val Ala Gly Ala Asn Lys Val Gln Pro Pro Val  
625 630 635 640

Leu Pro Arg Cys Lys Ser Glu Pro Arg Lys Ser Ala Ser Lys Leu Ala  
645 650 655

Pro Glu Ala Cys Phe Trp Lys Asn Arg Lys Leu Glu Pro His Pro Pro  
660 665 670

Ala Thr Val Gly Val Gly Gly Ala Gly Val Gly Phe  
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&lt;210&gt; 659

&lt;211&gt; 768

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 659

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&lt;210&gt; 660

&lt;211&gt; 255

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 660

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Arg Lys Ser Leu Tyr Ser Asn Gln Asp Asn Tyr Phe Asn Asn Trp Ser
          20           25           30

Ser Leu Thr Gln Ser Glu Glu Val Val Glu Glu Leu Ser Ile Gln Gln
35           40           45

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Thr Lys Tyr Asp His Arg Ser Leu Pro Ser Leu Arg Thr Ala Glu Ala  
50 55 60

Glu Ala Ala Glu Trp Asn Glu Leu Glu Arg Trp Gly Asn Gln Glu Leu  
65 70 75 80

Gln His Asn Gly Thr Arg Ile Arg Gly Ile Ile Thr Tyr Lys Ser Gly  
85 90 95

Asn Leu Pro Gly Val Leu Ser Phe Ser Val Ile Glu Ile Leu Met Met  
100 105 110

Val Val Ala Ser Phe Val Pro Asn Phe Leu Thr Gly Leu Phe Thr Gly  
115 120 125

Ala Gly Leu Ile Gly Ile Ile Met Thr Ser Ser Gly Phe Ser Arg Leu  
130 135 140

Leu Pro Asp Leu Pro Lys Ile Phe Cys Arg Phe Ser Ile Ser Tyr Thr  
145 150 155 160

Ile Ser Tyr Met Ile Phe Gly Ser Trp Ala Ile Lys Leu Gly His Asn  
165 170 175

Asn Asn Phe Leu Gly Pro Leu Ser Pro Asp Glu Pro Lys Met Thr Gly  
180 185 190

Glu Glu Met Asn Met Asn Glu Phe Gly Val Lys Val Thr His Ser Gly  
195 200 205

Trp Trp Gly Phe Pro Glu Ile Val Ile Ala Ile Leu Val Cys Thr Trp  
210 215 220

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<211> 855

<212> DNA

<213> Arabidopsis thaliana

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<211> 284

<212> PRT

<213> *Arabidopsis thaliana*

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Asp Gly Arg Gly Gln Ile Lys Asn Asn Gly Glu Leu Leu Thr Leu Ser  
35 40 45

Leu Asp Lys Ser Ser Gly Ser Gly Phe Gln Ser Lys Asn Glu Tyr Leu  
50 55 60

Phe Gly Lys Val Ser Met Gln Met Lys Leu Val Pro Gly Asn Ser Ala  
65 70 75 80



Gly Thr Val Thr Thr Leu Tyr Leu Lys Ser Pro Gly Thr Trp Asp  
85 90 95

Glu Ile Asp Phe Glu Phe Leu Gly Asn Ser Ser Gly Glu Pro Tyr Thr  
100 105 110

Leu His Thr Asn Val Tyr Thr Gln Gly Lys Gly Asp Lys Glu Gln Gln  
115 120 125

Phe Lys Leu Trp Phe Asp Pro Thr Ala Asn Phe His Thr Tyr Thr Ile  
130 135 140

Leu Trp Asn Pro Gln Arg Ile Ile Phe Thr Val Asp Gly Thr Pro Ile  
145 150 155 160

Arg Glu Phe Lys Asn Met Glu Ser Leu Gly Thr Leu Phe Pro Lys Asn  
165 170 175

Lys Pro Met Arg Met Tyr Ser Ser Leu Trp Asn Ala Asp Asp Trp Ala  
180 185 190

Thr Arg Gly Gly Leu Val Lys Thr Asp Trp Ser Lys Ala Pro Phe Thr  
195 200 205

Ala Ser Tyr Arg Gly Phe Gln Gln Glu Ala Cys Val Trp Ser Asn Gly  
210 215 220

Lys Ser Ser Cys Pro Asn Ala Ser Lys Gln Gly Thr Thr Thr Gly Ser  
225 230 235 240

Trp Leu Ser Gln Glu Leu Asp Ser Thr Ala Gln Gln Arg Met Arg Trp  
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<212> DNA

<213> Arabidopsis thaliana

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&lt;211&gt; 561

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 664

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Gly Phe Ala Phe Asn Asp Ser Asn Phe Ser Asp Arg Leu Leu Arg Ile  
 35 40 45

Glu Ile Met Gly Gly Pro Ser Asp Ser Arg Ser Glu Val Glu Gly Cys  
 50 55 60

Thr Ser Ile Ala Asp Trp Ala Arg His Arg Lys Arg Arg Arg Glu Asp  
 65 70 75 80

Ile Lys Lys Glu Ser Gly Val Thr Ile Ser Asp Ile Val Ala Cys Pro  
 85 90 95

Glu Glu Gln Ile Leu Thr Asp Glu Gln Pro Asp Met Asp Gly Cys Pro  
 100 105 110

Gly Gly Glu Asn Pro Asp Asp Glu Gly Gly Glu Ala Met Val Glu Glu  
 115 120 125

Ala Leu Ser Gly Asp Glu Glu Glu Thr Ser Ser Glu Pro Asn Trp Gly  
 130 135 140

Met Asp Cys Ser Thr Val Val Arg Val Lys Glu Leu His Ile Ser Ser  
 145 150 155 160

Pro Ile Leu Ala Ala Lys Ser Pro Phe Phe Tyr Lys Leu Phe Ser Asn  
 165 170 175

Gly Met Arg Glu Ser Glu Gln Arg His Val Thr Leu Arg Ile Asn Ala  
 180 185 190

Ser Glu Glu Ala Ala Leu Met Glu Leu Leu Asn Phe Met Tyr Ser Asn  
 195 200 205

Ala Val Ser Val Thr Thr Ala Pro Ala Leu Leu Asp Val Leu Met Ala  
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Ala Asp Lys Phe Glu Val Ala Ser Cys Met Arg Tyr Cys Ser Arg Leu  
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Leu Arg Asn Met Pro Met Thr Pro Glu Ser Ala Leu Leu Tyr Leu Glu  
 245 250 255

Leu Pro Ser Ser Val Leu Met Ala Lys Ala Val Gln Pro Leu Thr Asp  
 260 265 270

Ala Ala Lys Gln Phe Leu Ala Ala Arg Tyr Lys Asp Ile Thr Lys Phe  
 275 280 285

His Glu Glu Val Met Ser Leu Pro Leu Ala Gly Ile Glu Ala Ile Leu  
 290 295 300

Ser Ser Asp Glu Leu Gln Ile Ala Ser Glu Asp Ala Val Tyr Asp Phe  
 305 310 315 320

Ile Leu Lys Trp Ala Arg Ala Gln Tyr Pro Cys Leu Glu Glu Arg Arg  
 325 330 335

Glu Ile Leu Gly Ser Arg Leu Ala Leu Ser Ile Arg Phe Pro Phe Met  
 340 345 350

Thr Cys Arg Lys Leu Lys Lys Val Leu Thr Cys Ser Asp Phe Glu His  
 355 360 365

Glu Ile Ala Ser Lys Leu Val Leu Glu Ala Leu Phe Phe Lys Ala Glu  
 370 375 380

Ala Pro His Arg Gln Arg Ser Leu Ala Ser Glu Glu Ser Ala Ser Leu  
 385 390 395 400

Asn Arg Arg Leu Ile Glu Arg Ala Tyr Lys Tyr Arg Pro Val Lys Val  
 405 410 415

Val Glu Phe Glu Leu Pro Arg Pro Gln Cys Val Val Tyr Leu Asp Leu  
 420 425 430

Lys Arg Glu Glu Cys Gly Gly Leu Phe Pro Ser Gly Arg Val Tyr Ser  
 435 440 445

Gln Ala Phe His Leu Gly Gly Gln Gly Phe Phe Leu Ser Ala His Cys  
 450 455 460

Asn Met Asp Gln Gln Ser Ser Phe His Cys Phe Gly Leu Phe Leu Gly  
 465 470 475 480

Met Gln Glu Lys Gly Ser Val Ser Phe Gly Val Asp Tyr Glu Phe Ser  
 485 490 495

Ala Arg Ser Lys Pro Ala Glu Asp Phe Ile Ser Lys Tyr Lys Gly Asn  
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Tyr Thr Phe Thr Gly Gly Lys Ala Val Gly Tyr Arg Asn Leu Phe Gly  
 515 520 525

Val Pro Trp Thr Ser Phe Ile Ala Glu Asp Ser Gln Tyr Phe Ile Asn  
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Gly Ile Leu His Leu Arg Ala Glu Leu Thr Ile Lys Arg Ser Thr Asp  
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<211> 2787

<212> DNA

<213> Arabidopsis thaliana

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<213> Arabidopsis thaliana

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35 40 45

Asp Phe Cys Lys Trp Ser Gly Val Arg Cys Thr Gly Gly Arg Val Thr  
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Thr Ile Ser Leu Ala Asp Lys Ser Leu Thr Gly Phe Ile Ala Pro Glu  
65 70 75 80

Ile Ser Thr Leu Ser Glu Leu Lys Ser Val Ser Ile Gln Arg Asn Lys  
85 90 95

Leu Ser Gly Thr Ile Pro Ser Phe Ala Lys Leu Ser Ser Leu Gln Glu  
100 105 110

Ile Tyr Met Asp Glu Asn Asn Phe Val Gly Val Glu Thr Gly Ala Phe  
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Ala Gly Leu Thr Ser Leu Gln Ile Leu Ser Leu Ser Asp Asn Asn Asn  
130 135 140

Ile Thr Thr Trp Ser Phe Pro Ser Glu Leu Val Asp Ser Thr Ser Leu  
145 150 155 160

Thr Thr Ile Tyr Leu Asp Asn Thr Asn Ile Ala Gly Val Leu Pro Asp  
165 170 175

Ile Phe Asp Ser Leu Ala Ser Leu Gln Asn Leu Arg Leu Ser Tyr Asn  
1057

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 His Phe Phe Gly Pro Ile Pro Asp Leu Ser Lys Ser Glu Asn Leu Phe  
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 Phe Gln Gly Pro Leu Pro Leu Phe Ser Pro Glu Val Lys Val Thr Ile  
 290 295 300  
 Asp His Asn Val Phe Cys Thr Thr Lys Ala Gly Gln Ser Cys Ser Pro  
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 Thr Ser Leu Lys Ser Leu Tyr Leu Asn Gly Asn Asp Leu Thr Gly Val  
 385 390 395 400  
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Lys Phe Ser Tyr Lys Pro Gly Asn Ala Leu Leu Gly Thr Asn Gly Gly  
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 465 470 475 480  
 Val Ala Val Leu Val Phe Leu Ala Ile Leu Gly Phe Val Val Tyr Lys  
 485 490 495  
 Phe Val Met Lys Arg Lys Tyr Gly Arg Phe Asn Arg Thr Asp Pro Glu  
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 Lys Val Gly Lys Ile Leu Val Ser Asp Ala Val Ser Asn Gly Gly Ser  
 515 520 525  
 Gly Asn Gly Gly Tyr Ala Asn Gly His Gly Ala Asn Asn Phe Asn Ala  
 530 535 540  
 Leu Asn Ser Pro Ser Ser Gly Asp Asn Ser Asp Arg Phe Leu Leu Glu  
 545 550 555 560  
 Gly Gly Ser Val Thr Ile Pro Met Glu Val Leu Arg Gln Val Thr Asn  
 565 570 575  
 Asn Phe Ser Glu Asp Asn Ile Leu Gly Arg Gly Gly Phe Gly Val Val  
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 Tyr Ala Gly Glu Leu His Asp Gly Thr Lys Thr Ala Val Lys Arg Met  
 595 600 605  
 Glu Cys Ala Ala Met Gly Asn Lys Gly Met Ser Glu Phe Gln Ala Glu  
 610 615 620  
 Ile Ala Val Leu Thr Lys Val Arg His Arg His Leu Val Ala Leu Leu  
 625 630 635 640  
 Gly Tyr Cys Val Asn Gly Asn Glu Arg Leu Leu Val Tyr Glu Tyr Met  
 645 650 655  
 Pro Gln Gly Asn Leu Gly Gln His Leu Phe Glu Trp Ser Glu Leu Gly  
 660 665 670  
 Tyr Ser Pro Leu Thr Trp Lys Gln Arg Val Ser Ile Ala Leu Asp Val  
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Ala Arg Gly Val Glu Tyr Leu His Ser Leu Ala Gln Gln Ser Phe Ile  
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His Arg Asp Leu Lys Pro Ser Asn Ile Leu Leu Gly Asp Asp Met Arg  
705 710 715 720

Ala Lys Val Ala Asp Phe Gly Leu Val Lys Asn Ala Pro Asp Gly Lys  
725 730 735

Tyr Ser Val Glu Thr Arg Leu Ala Gly Thr Phe Gly Tyr Leu Ala Pro  
740 745 750

Glu Tyr Ala Ala Thr Gly Arg Val Thr Thr Lys Val Asp Val Tyr Ala  
755 760 765

Phe Gly Val Val Leu Met Glu Ile Leu Thr Gly Arg Lys Ala Leu Asp  
770 775 780

Asp Ser Leu Pro Asp Glu Arg Ser His Leu Val Thr Trp Phe Arg Arg  
785 790 795 800

Ile Leu Ile Asn Lys Glu Asn Ile Pro Lys Ala Leu Asp Gln Thr Leu  
805 810 815

Glu Ala Asp Glu Glu Thr Met Glu Ser Ile Tyr Arg Val Ala Glu Leu  
820 825 830

Ala Gly His Cys Thr Ala Arg Glu Pro Gln Gln Arg Pro Asp Met Gly  
835 840 845

His Ala Val Asn Val Leu Gly Pro Leu Val Glu Lys Trp Lys Pro Ser  
850 855 860

Cys Gln Glu Glu Glu Glu Ser Phe Gly Ile Asp Val Asn Met Ser Leu  
865 870 875 880

Pro Gln Ala Leu Gln Arg Trp Gln Asn Glu Gly Thr Ser Ser Ser Thr  
885 890 895

Met Phe His Gly Asp Phe Ser Tyr Ser Gln Thr Gln Ser Ser Ile Pro  
900 905 910

Pro Lys Ala Ser Gly Phe Pro Asn Thr Phe Asp Ser Ala Asp Gly Arg  
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&lt;211&gt; 1674

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 667

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<212> PRT

<213> Arabidopsis thaliana

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35 40 45

Asp Ser Leu Lys His Gly Ala Pro Asp Thr Trp Thr Leu Ile Lys Ala  
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His Gly Thr Ala Val Gly Leu Pro Ser Glu Asp Asp Met Gly Asn Ser  
65 70 75 80

Glu Val Gly His Asn Ala Leu Gly Ala Gly Arg Ile Phe Ala Gln Gly  
85 90 95

Ala Lys Leu Cys Asp Gln Ala Leu Ala Ser Gly Lys Ile Phe Glu Gly  
100 105 110

Glu Gly Phe Lys Tyr Val Ser Glu Ser Phe Glu Thr Asn Thr Leu His  
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Leu Val Gly Leu Leu Ser Asp Gly Gly Val His Ser Arg Leu Asp Gln  
130 135 140

Leu Gln Leu Leu Ile Lys Gly Ser Ala Glu Arg Gly Ala Lys Arg Ile  
145 150 155 160

Arg Val His Ile Leu Thr Asp Gly Arg Asp Val Leu Asp Gly Ser Ser  
165 170 175

Val Gly Phe Val Glu Thr Leu Glu Ala Asp Leu Val Ala Leu Arg Glu  
180 185 190

Asn Gly Val Asp Ala Gln Ile Ala Ser Gly Gly Gly Arg Met Tyr Val  
 195 200 205  
 Thr Leu Asp Arg Tyr Glu Asn Asp Trp Glu Val Val Lys Arg Gly Trp  
 210 215 220  
 Asp Ala Gln Val Leu Gly Glu Ala Pro His Lys Phe Lys Asn Ala Val  
 225 230 235 240  
 Glu Ala Val Lys Thr Leu Arg Lys Glu Pro Gly Ala Asn Asp Gln Tyr  
 245 250 255  
 Leu Pro Pro Phe Val Ile Val Asp Glu Ser Gly Lys Ala Val Gly Pro  
 260 265 270  
 Ile Val Asp Gly Asp Ala Val Val Thr Phe Asn Phe Arg Ala Asp Arg  
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 Asn Gly Asn Arg Ser Gly Tyr Phe Asn Glu Lys Leu Glu Glu Tyr Val  
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 Glu Ile Pro Ser Asp Ser Gly Ile Ser Phe Asn Val Gln Pro Lys Met  
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 Lys Ala Leu Glu Ile Gly Glu Lys Ala Arg Asp Ala Ile Leu Ser Gly  
 405 410 415  
 Lys Phe Asp Gln Val Arg Val Asn Ile Pro Asn Gly Asp Met Val Gly  
 420 425 430  
 His Thr Gly Asp Ile Glu Ala Thr Val Val Ala Cys Glu Ala Ala Asp  
 435 440 445

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Leu Ala Val Lys Met Ile Phe Asp Ala Ile Glu Gln Val Lys Gly Ile  
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Tyr Val Val Thr Ala Asp His Gly Asn Ala Glu Asp Met Val Lys Arg  
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Asp Lys Ser Gly Lys Pro Ala Leu Asp Lys Glu Gly Lys Leu Gln Ile  
485 490 495

Leu Thr Ser His Thr Leu Lys Pro Val Pro Ile Ala Ile Gly Gly Pro  
500 505 510

Gly Leu Ala Gln Gly Val Arg Phe Arg Lys Asp Leu Glu Thr Pro Gly  
515 520 525

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<213> Arabidopsis thaliana

<400> 670

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Arg	Gly	Ala	Gln	Asp	Ser	Leu	Arg	Ala	Glu	Pro	Gly	Val	Asn	Phe	Ser
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Thr	Leu	Asp	Gln	Leu	Asp	Ala	Ser	Lys	His	Ser	Leu	Gly	Tyr	Leu	Tyr
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Phe	Leu	Glu	Val	Leu	Thr	Cys	Gly	Pro	Val	Ser	Lys	Glu	Lys	Ala	Ala
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Gln	Ile	Arg	Leu	Ala	Ser	Tyr	Lys	Phe	Val	Ser	Leu	Cys	Lys	Ile	Leu
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 180 185 190  
 Gly Leu Lys Arg Phe Gln Lys Ala Leu Glu Leu Leu Tyr Asn Val Val  
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 Thr Ala Pro Met His Gln Val Asn Ala Ile Ala Leu Glu Ala Tyr Lys  
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 Lys Tyr Ile Leu Val Ser Leu Ile His Asn Gly Gln Phe Thr Asn Thr  
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 275 280 285  
 Asp Lys Asn Leu Gly Leu Val Lys Gln Ala Val Ser Ser Leu Tyr Lys  
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 Arg Asn Ile Leu Arg Leu Thr Gln Lys Tyr Leu Thr Leu Ser Leu Gln  
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 Gln Lys Asp Gly Met Val Arg Phe Leu Glu Asp Pro Glu Gln Tyr Lys  
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Ser Ser Glu Met Ile Glu Ile Met Asp Ser Val Ile Gln Arg Thr Ile  
 370 375 380

Gly Leu Ser Lys Asn Leu Leu Ala Met Asp Glu Ser Leu Ser Cys Asp  
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<211> 855

<212> DNA

<213> Arabidopsis thaliana

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<210> 672

<211> 284

<212> PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 672

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 20 25 30  
 Val Leu Gly Val Glu Arg Arg Ala Thr Ser Gln Glu Ile Arg Lys Ala  
 35 40 45  
 Tyr His Lys Leu Ala Leu Lys Leu His Pro Asp Lys Asn Gln Asp Asp  
 50 55 60  
 Lys Glu Ala Lys Asp Lys Phe Gln Gln Leu Gln Lys Val Ile Ser Ile  
 65 70 75 80  
 Leu Gly Asp Glu Glu Lys Arg Ala Val Tyr Asp Gln Thr Gly Ser Ile  
 85 90 95  
 Asp Asp Ala Asp Ile Pro Gly Asp Ala Phe Glu Asn Leu Arg Asp Phe  
 100 105 110  
 Phe Arg Asp Met Tyr Lys Lys Val Asn Glu Ala Asp Ile Glu Glu Phe  
 115 120 125  
 Glu Ala Asn Tyr Arg Gly Ser Glu Ser Glu Lys Lys Asp Leu Leu Glu  
 130 135 140  
 Leu Phe Asn Lys Phe Lys Gly Lys Met Asn Arg Leu Phe Cys Ser Met  
 145 150 155 160  
 Leu Cys Ser Asp Pro Lys Leu Asp Ser His Arg Phe Lys Asp Met Leu  
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 Asp Glu Ala Ile Ala Ala Gly Glu Val Lys Ser Ser Lys Ala Tyr Glu  
 180 185 190  
 Lys Trp Ala Asn Lys Ile Ser Glu Thr Lys Pro Pro Thr Ser Pro Leu  
 195 200 205  
 Arg Lys Arg Lys Lys Lys Lys Ser Ala Ala Lys Asp Ser Glu Thr Asp  
 210 215 220

Leu Cys Leu Met Ile Ala Lys Arg Gln Glu Glu Arg Lys Gly Lys Val  
 225 230 235 240

Asp Ser Met Phe Ser Ser Leu Ile Ser Arg Tyr Gly Gly Asp Ala Glu  
 245 250 255

Ala Glu Pro Thr Glu Glu Glu Phe Glu Ala Ala Gln Arg Arg Ile Glu  
 260 265 270

Ser Lys Arg Lys Pro Ser Lys Lys Ser Arg Gly Lys  
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<210> 673

<211> 1647

<212> DNA

<213> Arabidopsis thaliana

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<210> 674

<211> 548

<212> PRT

<213> Arabidopsis thaliana

<400> 674

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20 25 30

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35 40 45

Ala Thr Ser Ala Leu Leu Leu Ala Ser Val Ala Trp Leu Ser Leu Val  
50 55 60

Phe Ser Pro Thr Thr Ser Arg Cys Trp His Leu Leu Lys Asp Trp Glu  
65 70 75 80

Asp Asn His Leu Trp Asn Lys Arg Tyr His His Pro Ile Val Thr Pro  
85 90 95

Pro Pro Pro Pro Pro Ser Pro Pro Ser Leu Pro Ala Leu Pro Leu Phe  
100 105 110

Asp His Glu Phe Arg Asn Arg Ser Leu Ser Glu Ile Asp Lys Leu Asp  
115 120 125

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Leu Ser Met Asn His Leu Met Phe Gly Ile Ala Gly Ser Ser Gln Leu  
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 145 150 155 160  
 Met Arg Gly His Val Trp Leu Glu Glu Gln Val Ser Pro Glu Glu Gly  
 165 170 175  
 Asp Asp Ser Leu Pro Pro Ile Ile Val Ser Glu Asp Ser Ser Arg Phe  
 180 185 190  
 Arg Tyr Thr Asn Pro Thr Gly His Pro Ser Gly Leu Arg Ile Ser Arg  
 195 200 205  
 Ile Ala Met Glu Ser Phe Arg Leu Ser Leu Pro Asn Val Arg Trp Phe  
 210 215 220  
 Val Leu Gly Asp Asp Asp Thr Ile Phe Asn Val His Asn Leu Leu Ala  
 225 230 235 240  
 Val Leu Ser Lys Tyr Asp Pro Ser Glu Met Val Tyr Ile Gly Asn Pro  
 245 250 255  
 Ser Glu Ser His Ser Ala Asn Ser Tyr Phe Ser His Asn Met Ala Phe  
 260 265 270  
 Gly Gly Gly Gly Ile Ala Ile Ser Tyr Pro Leu Ala Glu Ala Leu Ser  
 275 280 285  
 Arg Ile His Asp Asp Cys Leu Asp Arg Tyr Pro Lys Leu Tyr Gly Ser  
 290 295 300  
 Asp Asp Arg Leu His Ala Cys Ile Thr Glu Leu Gly Val Pro Leu Ser  
 305 310 315 320  
 Arg Glu Pro Gly Phe His Gln Trp Asp Ile Lys Gly Asn Ala His Gly  
 325 330 335  
 Leu Leu Ser Ser His Pro Ile Ala Pro Phe Val Ser Ile His His Val  
 340 345 350  
 Glu Ala Val Asn Pro Leu Tyr Pro Gly Leu Ser Thr Leu Asp Ser Leu  
 355 360 365  
 Lys Leu Leu Thr Arg Ala Met Ser Leu Asp Pro Arg Ser Val Leu Gln

370

375

380

Arg Ser Ile Cys Tyr Asp His Thr His Lys Leu Thr Phe Ala Ile Ser  
385 390 395 400

Leu Gly Tyr Val Val Gln Val Phe Pro Ser Ile Leu Leu Pro Arg Asp  
405 410 415

Leu Glu Arg Ala Glu Leu Ser Phe Ser Ala Trp Asn Gly Ile Ser Gln  
420 425 430

Pro Ser Glu Phe Asp Leu Asp Ile Lys Leu Pro Ile Ser Ser Leu Cys  
435 440 445

Lys Lys Pro Ile Leu Phe Phe Leu Lys Glu Val Gly Gln Glu Gly Asn  
450 455 460

Ala Thr Leu Gly Thr Tyr Ser Arg Ser Leu Val Lys Asp Asp Leu Lys  
465 470 475 480

Thr Lys Leu Leu Cys Phe Pro Arg Ser Leu Pro Leu His Lys Val Asp  
485 490 495

Lys Ile Gln Val Ser Gly Phe Pro Leu Ser Lys Asn Trp His Leu Ala  
500 505 510

Pro Arg Arg Leu Cys Cys Arg Ala Thr Pro Thr Thr Thr Asn Glu Pro  
515 520 525

Leu Arg Leu Thr Val Gly Gln Cys Gly Lys Ile Ile Leu Gly Ser Thr  
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Ile Ser Ser Gln  
545

&lt;210&gt; 675

&lt;211&gt; 954

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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<210> 676

<211> 317

<212> PRT

<213> Arabidopsis thaliana

<400> 676

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Phe Val Val Pro Lys Ser Lys Glu Thr Asp Ala Phe Asp Ala Pro Asp	
35 40 45	

Met Asn Phe Leu Gly His Ser Phe Arg Asp Tyr Glu Asn Gly Glu Ser	
50 55 60	

Glu Arg Gln Gln Gly Val Glu Glu Phe Tyr Arg Met Gln His Ile His	
65 70 75 80	

Gln Thr Tyr Asp Phe Val Lys Lys Met Arg Lys Glu Tyr Gly Lys Leu	
85 90 95	

047-E2F-PCT.ST25.txt

Asn Lys Met Glu Met Ser Ile Trp Glu Cys Cys Glu Leu Asn Asn  
 100 105 110  
 Val Val Asp Glu Ser Asp Pro Asp Leu Asp Glu Pro Gln Ile Gln His  
 115 120  
 Leu Leu Gln Thr Ala Glu Ala Ile Arg Arg Asp Tyr Pro Asp Glu Asp  
 130 135 140  
 Trp Leu His Leu Thr Ala Leu Ile His Asp Leu Gly Lys Val Leu Leu  
 145 150 155  
 Leu Pro Glu Phe Gly Gly Leu Pro Gln Trp Ala Val Val Gly Asp Thr  
 165 170 175  
 Phe Pro Val Gly Cys Thr Phe Asp Ser Ala Asn Ile His His Lys Tyr  
 180 185 190  
 Phe Lys Gly Asn His Asp Ile Asn Asn Pro Lys Tyr Asn Thr Lys Asn  
 195 200 205  
 Gly Val Tyr Thr Glu Gly Cys Gly Leu Asp Asn Val Leu Met Ser Trp  
 210 215 220  
 Gly His Asp Asp Tyr Met Tyr Leu Val Ala Lys Lys Asn Gly Thr Thr  
 225 230 235 240  
 Leu Pro His Ala Gly Leu Phe Ile Ile Arg Tyr His Ser Phe Tyr Pro  
 245 250 255  
 Leu His Lys Ala Gly Ala Tyr Thr His Leu Met Asn Asp Glu Asp Arg  
 260 265 270  
 Asp Asp Leu Lys Trp Leu His Val Phe Asn Lys Tyr Asp Leu Tyr Ser  
 275 280 285  
 Lys Ser Lys Val Leu Val Asp Val Glu Gln Val Lys Pro Tyr Tyr Ile  
 290 295 300  
 Ser Leu Ile Asn Lys Tyr Phe Pro Ala Lys Leu Lys Trp  
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<210> 677

<211> 1173

<212> DNA



<213> *Arabidopsis thaliana*

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atttgtttga cttcgtttcc tgcctctagg gatctcaaga aaaatgtcac ttgtaactcg    180
actcgaaatg ttggtccagt cagggtgcat gctatgcaag ctgggacgag ggagttgaag    240
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atattcgatg ttgcacgcga aatggaaaag atagaaaaga gctcttcaca aagtgaatc     360
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&lt;210&gt; 678

&lt;211&gt; 390

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 678

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Val Phe Pro Lys Ala Leu Ala Cys Ser Ser Glu Phe Pro Ile Asn Leu
Page 1075

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Pro Ser Pro Phe Glu Ser Ser Lys Ile Cys Leu Thr Ser Phe Pro Ala  
35 40 45

Ser Arg Asp Leu Lys Lys Asn Ala Thr Leu Asn Leu Thr Arg Asn Val  
50 55 60

Gly Pro Val Arg Cys His Ala Met Gln Ala Gly Thr Arg Glu Leu Lys  
65 70 75 80

Lys Phe Glu Leu Ser Asp Val Ile Glu Gly Lys Gln Phe Asp Arg Glu  
85 90 95

Met Leu Ser Ala Ile Phe Asp Val Ala Arg Glu Met Glu Lys Ile Glu  
100 105 110

Lys Ser Ser Ser Gln Ser Glu Ile Leu Lys Gly Tyr Leu Met Ala Thr  
115 120 125

Leu Phe Tyr Glu Pro Ser Thr Arg Thr Arg Leu Ser Phe Glu Ser Ala  
130 135 140

Met Lys Arg Leu Gly Gly Glu Val Leu Thr Thr Glu Asn Ala Arg Glu  
145 150 155 160

Phe Ser Ser Ala Ala Lys Gly Glu Thr Leu Glu Asp Thr Ile Arg Thr  
165 170 175

Val Glu Gly Tyr Ser Asp Ile Ile Val Met Arg His Phe Glu Ser Gly  
180 185 190

Ala Ala Arg Lys Ala Ala Ala Thr Ala Asn Ile Pro Val Ile Asn Ala  
195 200 205

Gly Asp Gly Pro Gly Glu His Pro Thr Gln Ala Leu Leu Asp Val Tyr  
210 215 220

Thr Ile Gln Ser Glu Ile Gly Lys Leu Asp Gly Ile Ser Val Ala Leu  
225 230 235 240

Val Gly Asp Leu Ala Asn Gly Arg Thr Val Arg Ser Leu Ala Tyr Leu  
245 250 255

Leu Ala Lys Phe Lys Asp Val Lys Ile Tyr Phe Val Ser Pro Glu Ile  
260 265 270

Val Lys Met Lys Asp Asp Ile Lys Asp Tyr Leu Thr Ser Ser Gly Val  
 275 280 285

Glu Trp Glu Glu Ser Ser Asp Leu Met Glu Val Ala Ser Lys Cys Asp  
 290 295 300

Val Val Tyr Gln Thr Arg Ile Gln Arg Glu Arg Phe Gly Glu Arg Leu  
 305 310 315 320

Asp Leu Tyr Glu Ala Ala Arg Gly Lys Tyr Ile Val Asp Lys Asp Leu  
 325 330 335

Leu Gly Val Met Gln Lys Lys Ala Ile Ile Met His Pro Leu Pro Arg  
 340 345 350

Leu Asp Glu Ile Thr Ala Asp Val Asp Ala Asp Pro Arg Ala Ala Tyr  
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Leu Leu Leu Val Gly Trp  
 385 390

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<211> 978

<212> DNA

<213> Arabidopsis thaliana

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<210> 680

<211> 325

<212> PRT

<213> Arabidopsis thaliana

<400> 680

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Thr Ser Met Ala Ile Ala Ser Arg Val Ser Asn Leu Asp Ser Glu Val  
35 40 45

Val Glu Leu Arg Gln Lys Leu Leu Gly Lys Glu Ser Val Val Arg Glu  
50 55 60

Leu Glu Glu Lys Ala Ser Arg Leu Glu Arg Asp Cys Arg Glu Ala Asp  
65 70 75 80

Ser Arg Leu Lys Val Val Leu Glu Asp Asn Met Asn Leu Thr Lys Glu  
85 90 95

Lys Asp Ser Leu Ala Met Thr Val Thr Lys Leu Thr Arg Asp Leu Ala  
100 105 110

Lys Leu Glu Thr Phe Lys Arg Gln Leu Ile Lys Ser Leu Ser Asp Glu  
115 120 125

Ser Gly Pro Gln Thr Glu Pro Val Asp Ile Arg Thr Cys Asp Gln Pro  
130 135 140

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Gly Ser Tyr Pro Gly Lys Asp Gly Arg Ile Asn Ala His Ser Ile Lys  
145 150 155 160

Gln Ala Tyr Ser Gly Ser Thr Asp Thr Asn Asn Pro Val Val Glu Ala  
165 170 175

Ser Lys Tyr Thr Gly Asn Lys Phe Ser Met Thr Ser Tyr Ile Ser Pro  
180 185 190

Arg Leu Thr Pro Thr Ala Thr Pro Lys Ile Ile Ser Thr Ser Val Ser  
195 200 205

Pro Arg Gly Tyr Ser Ala Ala Gly Ser Pro Lys Arg Thr Ser Gly Ala  
210 215 220

Val Ser Pro Thr Lys Ala Thr Leu Trp Tyr Pro Ser Ser Gln Gln Ser  
225 230 235 240

Ser Ala Ala Asn Ser Pro Pro Arg Asn Arg Thr Leu Pro Ala Arg Thr  
245 250 255

Pro Arg Met Asp Gly Lys Glu Phe Phe Arg Gln Ala Arg Ser Arg Leu  
260 265 270

Ser Tyr Glu Gln Phe Ser Ser Phe Leu Ala Asn Ile Lys Glu Leu Asn  
275 280 285

Ala Gln Lys Gln Thr Arg Glu Glu Thr Leu Arg Lys Ala Asp Glu Ile  
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Phe Gly Glu Glu Asn Lys Asp Leu Tyr Leu Ser Phe Gln Gly Leu Leu  
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Asn Arg Asn Met Arg  
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<211> 1440

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 682

&lt;211&gt; 479

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 682

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Pro Gln Phe Thr Ser Phe Pro Pro Phe Thr Asn Thr Asn Pro Phe Ala
20      25      30

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Ser Pro Asn His Pro Phe Phe Thr Gly Pro Thr Ala Val Ala Pro Pro  
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Asn Asn Ile His Leu Tyr Gln Ala Ala Pro Pro Gln Gln Pro Gln Thr  
50 55 60

Ser Pro Val Pro Pro His Pro Ser Ile Ser His Pro Pro Tyr Ser Asp  
65 70 75 80

Met Ile Cys Thr Ala Ile Ala Ala Leu Asn Glu Pro Asp Gly Ser Ser  
85 90 95

Lys Gln Ala Ile Ser Arg Tyr Ile Glu Arg Ile Tyr Thr Gly Ile Pro  
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Thr Ala His Gly Ala Leu Leu Thr His His Leu Lys Thr Leu Lys Thr  
115 120 125

Ser Gly Ile Leu Val Met Val Lys Lys Ser Tyr Lys Leu Ala Ser Thr  
130 135 140

Pro Pro Pro Pro Pro Pro Thr Ser Val Ala Pro Ser Leu Glu Pro Pro  
145 150 155 160

Arg Ser Asp Phe Ile Val Asn Glu Asn Gln Pro Leu Pro Asp Pro Val  
165 170 175

Leu Ala Ser Ser Thr Pro Gln Thr Ile Lys Arg Gly Arg Gly Arg Pro  
180 185 190

Pro Lys Ala Lys Pro Asp Val Val Gln Pro Gln Pro Leu Thr Asn Gly  
195 200 205

Lys Leu Thr Trp Glu Gln Ser Glu Leu Pro Val Ser Arg Pro Glu Glu  
210 215 220

Ile Gln Ile Gln Pro Pro Gln Leu Pro Leu Gln Pro Gln Gln Pro Val  
225 230 235 240

Lys Arg Pro Pro Gly Arg Pro Arg Lys Asp Gly Thr Ser Pro Thr Val  
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Lys Pro Ala Ala Ser Val Ser Gly Gly Val Glu Thr Val Lys Arg Arg  
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Gly Arg Pro Pro Ser Gly Arg Ala Ala Gly Arg Glu Arg Lys Pro Ile  
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275 047-E2F-PCT.ST25.txt  
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Val Val Ser Ala Pro Ala Ser Val Phe Pro Tyr Val Ala Asn Gly Gly  
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Val Arg Arg Arg Gly Arg Pro Lys Arg Val Asp Ala Gly Gly Ala Ser  
305 310 315 320

Ser Val Ala Pro Pro Pro Pro Pro Thr Asn Val Glu Ser Gly Gly  
325 330 335

Glu Glu Val Ala Val Lys Lys Arg Gly Arg Gly Arg Pro Pro Lys Ile  
340 345 350

Gly Gly Val Ile Arg Lys Pro Met Lys Pro Met Arg Ser Phe Ala Arg  
355 360 365

Thr Gly Lys Pro Val Gly Arg Pro Arg Lys Asn Ala Val Ser Val Gly  
370 375 380

Ala Ser Gly Arg Gln Asp Gly Asp Tyr Gly Glu Leu Lys Lys Lys Phe  
385 390 395 400

Glu Leu Phe Gln Ala Arg Ala Lys Asp Ile Val Ile Val Leu Lys Ser  
405 410 415

Glu Ile Gly Gly Ser Gly Asn Gln Ala Val Val Gln Ala Ile Gln Asp  
420 425 430

Leu Glu Gly Ile Ala Glu Thr Thr Asn Glu Pro Lys His Met Glu Glu  
435 440 445

Val Gln Leu Pro Asp Glu Glu His Leu Glu Thr Glu Pro Glu Ala Glu  
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<211> 609

<212> DNA

<213> Arabidopsis thaliana

<400> 683

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Page 1082

60



047-E2F-PCT.ST25.txt

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<212> PRT

<213> Arabidopsis thaliana

<400> 684

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Leu Glu Ile Phe Lys Ile His Gly Arg Asp Lys Arg Gly Arg Lys Ile
                20           25           30

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Leu Arg Ile Ile Gly Lys Phe Phe Pro Ala Arg Phe Leu Ser Leu Asp
35           40           45

```

```

Val Leu Lys Lys Tyr Leu Glu Glu Lys Ile Phe Pro Arg Leu Gly Arg
50           55           60

```

```

Lys Pro Phe Ala Val Leu Tyr Val His Thr Gly Val Gln Arg Ser Glu
65           70           75           80

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```

Asn Phe Pro Gly Ile Ser Ala Leu Arg Ala Ile Tyr Asp Ala Ile Pro
85           90           95

```

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Val Asn Val Arg Asp Asn Leu Gln Glu Val Tyr Phe Leu His Pro Gly
100          105          110

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```

Leu Gln Ser Arg Leu Phe Leu Ala Thr Cys Gly Arg Phe Leu Phe Ser
Page 1083

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115 120 047-E2F-PCT.ST25.txt 125

Gly Gly Leu Tyr Gly Lys Leu Arg Tyr Ile Ser Arg Val Asp Tyr Leu  
130 135

Trp Glu His Val Arg Arg Asn Glu Ile Glu Met Pro Glu Phe Val Tyr  
145 150 155

Asp His Asp Asp Asp Leu Glu Tyr Arg Pro Met Met Asp Tyr Gly Gln  
165 170 175

Glu Ser Asp His Ala Arg Val Phe Ala Gly Ala Ala Val Asp Ser Ser  
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Val Ser Ser Phe Ser Met Arg Cys Ile Ser  
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<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 686

&lt;211&gt; 478

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 686

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Ile Pro Leu Val Phe Leu Ile Tyr Phe Glu Val Ala Gly Gly Pro Phe
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Gly Glu Glu Pro Ala Val Gln Ala Ala Gly Pro Leu Leu Ala Ile Leu
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Gly Phe Leu Ile Phe Pro Phe Ile Trp Ser Ile Pro Glu Ala Leu Ile
65 70 75 80

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Thr Ala Glu Leu Ser Thr Ala Phe Pro Gly Asn Gly Gly Phe Val Ile
85 90 95

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Trp Ala His Arg Ala Phe Gly Ser Phe Val Gly Ser Met Met Gly Ser
100 105 110

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Leu Lys Phe Leu Ser Gly Val Ile Asn Val Ala Ser Phe Pro Val Leu
115 120 125

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047-E2F-PCT.ST25.txt

Cys Val Thr Tyr Leu Asp Lys Leu Phe Pro Val Leu Glu Ser Gly Trp  
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 Asn Tyr Thr Gly Leu Ala Ile Val Gly Tyr Ala Ala Val Val Leu Gly  
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 Lys Ile Lys Pro His Arg Trp Gly Ser Leu Gly Thr Lys Lys Asp  
 195 200  
 Trp Asn Leu Tyr Phe Asn Thr Leu Phe Trp Asn Leu Asn Phe Trp Asp  
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 225 230  
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 Ile Pro Leu Phe Ala Val Thr Gly Ala Val Ser Val Asp Gln Ser Arg  
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 275 280  
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 Phe Asn Thr Pro Trp Val Gly Ile Leu Ile Ser Ala Leu Met Ser Leu  
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 370 375

047-E2F-PCT.ST25.txt

Arg Arg Lys Leu Pro Gln Leu Lys Arg Pro Tyr Arg Val Pro Leu Lys  
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Ile Pro Gly Leu Val Val Met Cys Leu Ile Pro Ser Ala Phe Leu Val  
405 410 415

Leu Ile Leu Val Phe Ala Thr Lys Ile Val Tyr Leu Ile Cys Gly Val  
420 425 430

Met Thr Ile Gly Ala Ile Gly Trp Tyr Phe Leu Ile Asn Tyr Phe Arg  
435 440 445

Lys Thr Lys Ile Phe Glu Phe Asn Glu Val Ile Asp Asp Leu Asp Asn  
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<211> 1857

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 688

&lt;211&gt; 618

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 688

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Tyr	Leu	Tyr	Phe	Trp	Asn	Pro	Glu	Thr	Asn	Val	Thr	Gln	Tyr	Glu	Lys
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Pro	Thr	Pro	Ser	Leu	Pro	Pro	Lys	Phe	Ser	Pro	Ala	Val	Ser	Val	Ser
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047-E2F-PCT.ST25.txt

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 Gly Asp Ser Ala Tyr Gly Ala Ala Ser Thr Arg Val Pro Leu Pro Ser  
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 Page 1089

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Gln Thr Leu Met Tyr Thr Ala Thr Trp Pro Lys Gly Val Arg Lys Ile  
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Ala Ala Asp Leu Leu Val Asn Pro Ala Gln Val Asn Ile Gly Asn Val  
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Asp Glu Leu Val Ala Asn Lys Ser Ile Thr Gln His Ile Glu Val Val  
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Ala Pro Met Glu Lys Gln Arg Arg Leu Glu Gln Ile Leu Arg Ser Gln  
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Glu Pro Gly Ser Lys Val Ile Ile Phe Cys Ser Thr Lys Arg Met Cys  
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Asp Gln Leu Thr Arg Asn Leu Thr Arg Gln Phe Gly Ala Ala Ala Ile  
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His Gly Asp Lys Ser Gln Pro Glu Arg Asp Asn Val Leu Asn Gln Phe  
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Arg Ser Gly Arg Thr Pro Val Leu Val Ala Thr Asp Val Ala Ala Arg  
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Gly Leu Asp Val Lys Asp Ile Arg Ala Val Val Asn Tyr Asp Phe Pro  
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Asn Gly Val Glu Asp Tyr Val His Arg Ile Gly Arg Thr Gly Arg Ala  
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Gly Ala Thr Gly Gln Ala Phe Thr Phe Phe Gly Asp Gln Asp Ser Lys  
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His Ala Ser Asp Leu Ile Lys Ile Leu Glu Gly Ala Asn Gln Arg Val  
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Pro Pro Gln Ile Arg Glu Met Ala Thr Arg Gly Gly Gly Gly Met Asn  
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Lys Phe Ser Arg Trp Gly Pro Pro Ser Gly Gly Arg Gly Arg Gly Gly  
545                      550                      555                      560



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<211> 319

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 690

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Leu His Ser Ala Ile Pro His Phe Gly Met Leu Arg Cys Arg Ser Arg  
 35 40 45

Gln Pro Phe Ser Thr Ser Val Val Lys Ala Gln Ala Thr Ala Thr Glu  
 50 55 60

Gln Ser Pro Gly Glu Val Val Gln Lys Val Glu Ser Pro Val Val Val  
 65 70 75 80

Ile Thr Gly Ala Ser Arg Gly Ile Gly Lys Ala Ile Ala Leu Ala Leu  
 85 90 95

Gly Lys Ala Gly Cys Lys Val Leu Val Asn Tyr Ala Arg Ser Ala Lys  
 100 105 110

Glu Ala Glu Glu Val Ala Lys Gln Ile Glu Glu Tyr Gly Gly Gln Ala  
 115 120 125

Ile Thr Phe Gly Gly Asp Val Ser Lys Ala Thr Asp Val Asp Ala Met  
 130 135 140

Met Lys Thr Ala Leu Asp Lys Trp Gly Thr Ile Asp Val Val Val Asn  
 145 150 155 160

Asn Ala Gly Ile Thr Arg Asp Thr Leu Leu Ile Arg Met Lys Gln Ser  
 165 170 175

Gln Trp Asp Glu Val Ile Ala Leu Asn Leu Thr Gly Val Phe Leu Cys  
 180 185 190

Thr Gln Ala Ala Val Lys Ile Met Met Lys Lys Lys Arg Gly Arg Ile  
 195 200 205

Ile Asn Ile Ser Ser Val Val Gly Leu Ile Gly Asn Ile Gly Gln Ala  
 210 215 220

Asn Tyr Ala Ala Ala Lys Gly Gly Val Ile Ser Phe Ser Lys Thr Ala  
225 230 235 240

Ala Arg Glu Gly Ala Ser Arg Asn Ile Asn Val Asn Val Val Cys Pro  
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Gly Phe Ile Ala Ser Asp Met Thr Ala Glu Leu Gly Glu Asp Met Glu  
260 265 270

Lys Lys Ile Leu Gly Thr Ile Pro Leu Gly Arg Tyr Gly Lys Ala Glu  
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Ser Gly Ile Ser Pro Ile Val Asp Ser Glu Lys Glu Gln Ile Lys Thr  
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Leu Ser Glu Ala Leu Thr Val Ile Gly Lys His Asp Phe Pro Lys Ala  
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Trp Pro Ala Leu Leu Pro Glu Leu Ile Ala Asn Leu Gln Asn Ala Ala  
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Ser Ile Phe Lys Lys Phe Ser Tyr Glu Tyr Arg Thr Asp Ala Leu Phe  
 Page 1095

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 Ser Asn Tyr Pro Ala Leu Glu Ser Thr Glu Glu Gly Leu Thr Leu Val  
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 His His Ala Leu Phe Ala Gly Asp Asn Val Ile Lys Glu Ile Cys Gln  
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 Glu Val Ala Gly Pro Cys Ile Gly Gly Leu Thr Ser Ile Leu Ser Glu  
 595 600 605  
 Val Cys Lys Asn Pro Lys Asn Pro Ile Phe Asn His Tyr Leu Phe Glu  
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 Ser Val Ala Val Leu Val Arg Arg Ala Cys Glu Arg Asp Ile Ser Leu  
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His Glu Val Thr Gln Glu Asn Arg Leu Ser Gln Val Leu Gly Ile Phe  
725 730 735

Glu Lys Leu Val Ala Ser Pro Ser Thr Asp Glu Gln Gly Phe Tyr Ile  
740 745 750

Leu Asn Thr Ile Ile Glu Asn Leu Asp Tyr Ser Val Ile Ala Pro Tyr  
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Thr Val Lys Phe Gln Lys Ser Leu Val Ile Phe Met Ser Leu Phe Leu  
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Val Lys His Gly Gln Ala Tyr Leu Val Glu Thr Met Asn Thr Val Gln  
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Pro Asn Ile Ile Thr Ala Ile Val Glu His Phe Trp Ile Pro Asn Leu  
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Lys Leu Ile Met Gly Ser Met Glu Val Lys Leu Thr Ala Val Ala Ala  
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Pro Glu Gln Glu Arg Val Leu Asp Glu Pro Glu Met Pro Glu Ile Ser  
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Glu Asn Val Gly Tyr Thr Ala Ala Phe Val Lys Leu His Asn Ala Gly  
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Lys Lys Glu Glu Asp Pro Leu Lys Asp Ile Lys Asp Pro Lys Gln Phe  
915 920 925



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 930 935 940

Pro Gln Ile Ile Gly Glu Asn Leu Glu Gln Ala Asn Gln Thr Ala Leu  
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&lt;212&gt; PRT

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&lt;400&gt; 694

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Ile Ile Leu Gly Met Ala Lys Gly Leu Ala Tyr Leu His Glu Gly Leu  
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Arg Asn Pro Val Asp Tyr Ser Arg Pro Gln Gly Glu Val Phe Asp Lys  
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Val His Ser His Ala Ser Lys Asn Thr Leu Asp Gly Leu Asp Met Phe  
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Asp Gln Ala Leu Val Gly Asp Lys Thr Ile Ala Phe Trp Leu Met Asp

610

615

620

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&lt;211&gt; 597

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<213> *Arabidopsis thaliana*

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&lt;210&gt; 698

&lt;211&gt; 198

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 698

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Val Gly Glu Tyr Gly Leu Arg Asn Lys Arg Glu Leu Trp Arg Val Gln
35     40     45
Tyr Ser Leu Ser Arg Ile Arg Asn Ala Ala Arg Asp Leu Leu Thr Leu
50     55     60
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Thr Ile Val Phe Lys Ser Gly Met Ala Lys Ser Ile His His Ser Arg  
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Val Leu Ile Arg Gln Arg His Ile Arg Val Gly Lys Gln Leu Val Asn  
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Ile Pro Ser Phe Met Val Arg Leu Asp Ser Gln Lys His Ile Asp Phe  
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Ala Leu Thr Ser Pro Phe Gly Gly Gly Arg Pro Gly Arg Val Lys Arg  
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Asp Gly Asp Asp Glu Glu  
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<211> 879

<212> DNA

<213> Arabidopsis thaliana

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<211> 292

<212> PRT

<213> Arabidopsis thaliana

<400> 700

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Thr Thr	Asp Pro Lys Pro Arg	Leu Arg Trp Thr Ser	Glu Leu His Glu
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Arg Phe Val	Asp Ala Val Thr	Gln Leu Gly Gly	Pro Asp Lys Ala Thr
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Pro Lys Thr Ile Met	Arg Thr Met Gly Val	Lys Gly Leu Thr Leu Tyr
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His Leu Lys Ser	His Leu Gln Lys Phe	Arg Leu Gly Arg Gln Ser Cys
85	90	95

Lys Glu Ser	Ile Asp Asn Ser Lys	Asp Val Ser Cys Val	Ala Glu Ser
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Gln Asp Thr	Gly Ser Ser Ser Thr	Ser Ser Leu Arg	Leu Ala Ala Gln
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Glu Gln Asn Glu Ser Tyr	Gln Val Thr Glu Ala	Leu Arg Ala Gln Met
130	135	140

Glu Val Gln Arg Arg	Leu His Glu Gln Leu	Glu Val Gln Arg Arg Leu
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Gln Leu Arg Ile Glu Ala Gln Gly Lys Tyr Leu Gln Ser Ile Leu Glu  
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Lys Ala Cys Lys Ala Ile Glu Glu Gln Ala Val Ala Phe Ala Gly Leu  
180 185 190

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195 200 205

Thr Asn Gly Cys Gln Gly Thr Thr Ser Thr Phe Asp Thr Thr Lys Met  
210 215 220

Met Ile Pro Ser Leu Ser Glu Leu Ala Val Ala Ile Glu His Lys Asn  
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Asn Cys Ser Ala Glu Ser Ser Leu Thr Ser Ser Thr Val Gly Ser Pro  
245 250 255

Val Ser Ala Ala Leu Met Lys Lys Arg Gln Arg Gly Val Phe Gly Asn  
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<213> Arabidopsis thaliana

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<211> 265

<212> PRT

<213> *Arabidopsis thaliana*

<400> 702

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Phe Ser Ser Ala Ser Ala Leu Ser Ser Gly Ala Cys Ala Tyr Gly Ser  
 35 40 45

Met Ala Thr Ser Phe Phe Ala Gly His Ile Ala Ala Ala Ile Pro Ser  
 50 55 60

Ile Tyr Lys Asp Gly Ala Gly Cys Gly Ala Cys Phe Gln Val Arg Cys  
 65 70 75 80

Lys Asn Pro Lys Leu Cys Ser Thr Lys Gly Thr Ile Val Met Ile Thr  
 85 90 95

Asp Leu Asn Lys Ser Asn Gln Thr Asp Leu Val Leu Ser Ser Arg Ala  
 100 105 110

Phe Arg Ala Met Ala Lys Pro Ile Val Gly Ala Asp Lys Asp Leu Leu  
 115 120 125

Lys Gln Gly Ile Val Asp Ile Glu Tyr Gln Arg Val Pro Cys Asp Tyr  
 130 135 140

Gly Asn Lys Asn Met Asn Val Arg Val Glu Glu Ala Ser Lys Lys Pro  
 Page 1111

145 150 155 160

Asn Tyr Leu Glu Ile Lys Leu Leu Tyr Gln Gly Gly Gln Thr Glu Val  
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Val Ser Ile Asp Ile Ala Gln Val Gly Ser Ser Pro Asn Trp Gly Tyr  
180 185 190

Met Thr Arg Ser His Gly Ala Val Trp Val Thr Asp Lys Val Pro Thr  
195 200 205

Gly Ala Ile Gln Phe Arg Phe Val Val Thr Gly Gly Tyr Asp Gly Lys  
210 215 220

Met Ile Trp Ser Gln Ser Val Leu Pro Ser Asn Trp Glu Ala Gly Lys  
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<211> 1296

<212> DNA

<213> Arabidopsis thaliana

<400> 703

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<211> 431

<212> PRT

<213> Arabidopsis thaliana

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35 40 45

Pro Val Ile Ile Ala Ser Gly Ile Thr Tyr Asp Arg Glu Asn Ile Glu  
50 55 60

Lys Trp Phe Glu Ser Gly Tyr Gln Thr Cys Pro Val Thr Asn Thr Val  
65 70 75 80

Leu Thr Ser Leu Glu Gln Ile Pro Asn His Thr Ile Arg Arg Met Ile  
85 90 95

Gln Gly Trp Cys Gly Ser Ser Leu Gly Gly Gly Ile Glu Arg Ile Pro  
100 105 110

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Thr Pro Arg Val Pro Val Thr Ser His Gln Val Ser Glu Ile Cys Glu  
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Met Val Thr Lys Met Thr Arg Leu Gly Lys Glu Ser Glu Arg Asn Arg  
145 150 155

Lys Cys Val Lys Glu Asn Gly Ala Gly Leu Val Leu Cys Val Cys Phe  
165 170 175

Asp Ala Phe Ser Glu Asn Ala Asn Ala Ser Leu Leu Leu Glu Glu Thr  
180 185 190

Val Ser Val Leu Thr Trp Met Leu Pro Ile Gly Leu Glu Gly Gln Ser  
195 200 205

Lys Leu Thr Thr Thr Ser Ser Phe Asn Arg Leu Val Glu Leu Leu Arg  
210 215 220

Asn Gly Asp Gln Asn Ala Ala Phe Leu Ile Lys Glu Leu Leu Glu Leu  
225 230 235 240

Asn Val Thr His Val His Ala Leu Thr Lys Ile Asn Gly Val Gln Glu  
245 250 255

Ala Phe Met Lys Ser Ile Asn Arg Asp Ser Thr Cys Val Asn Ser Leu  
260 265 270

Ile Ser Ile His His Met Ile Leu Thr Asn Gln Glu Thr Val Ser Arg  
275 280 285

Phe Leu Glu Leu Asp Leu Val Asn Ile Thr Val Glu Met Leu Val Asp  
290 295 300

Ser Glu Asn Ser Val Cys Glu Lys Ala Leu Thr Val Leu Asn Val Ile  
305 310 315 320

Cys Glu Thr Lys Glu Gly Arg Glu Lys Val Arg Arg Asn Lys Leu Val  
325 330 335

Ile Pro Ile Leu Val Lys Lys Ile Leu Lys Ile Ser Glu Lys Lys Asp  
340 345 350

Leu Val Ser Val Met Trp Lys Val Cys Lys Ser Gly Asp Gly Ser Glu  
355 360 365



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Val Glu Glu Ala Leu Arg Leu Gly Ala Phe Lys Lys Leu Val Val Met  
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Leu Lys Met Met Asn Lys Val Met Lys Met Asn Gly Phe Val Asp Arg  
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<211> 747

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<211> 248

<212> PRT

<213> Arabidopsis thaliana

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35 40 45His Pro Thr Asn Gln Val Asn Val Lys Glu Glu Ala Val Lys Lys Glu  
50 55 60Gln Ala Thr Glu Pro Gly Lys Arg Arg Lys Arg Lys Asn Val Tyr Arg  
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195 200 205Ser Ser Leu Glu Ser Phe Leu Glu Leu Asp Gly Asn Thr Ala Glu Gln  
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<211> 4509

<212> DNA

<213> *Arabidopsis thaliana*

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Thr Arg Ile Lys Glu Gly Phe Phe Gly Pro Glu Val Phe Asn Ser Glu  
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<211> 2208

<212> PRT

<213> Arabidopsis thaliana

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Arg Cys Ser Val Lys Lys Pro Val Ile Pro Glu Ser Pro Phe Leu Gly  
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Thr Arg Val Arg Arg Ser Gly Ser Glu Thr Leu Gln Phe Trp Arg Ser  
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Asp Gly Pro Gly Arg Ser Ala Lys Leu Arg Thr Val Val Lys Ser Ser  
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Phe Ser Ala Val Pro Glu Lys Pro Leu Gly Leu Tyr Asp Pro Ser Tyr  
100 105 110

Asp Lys Asp Ser Cys Gly Val Gly Phe Val Ala Glu Leu Ser Gly Glu  
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Thr Thr Arg Lys Thr Val Thr Asp Ser Leu Glu Met Leu Ile Arg Met  
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Thr His Arg Gly Ala Cys Gly Cys Glu Ser Asn Thr Gly Asp Gly Ala  
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Gly Ile Leu Val Gly Leu Pro His Asp Phe Tyr Ala Glu Ala Ala Thr  
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Glu Leu Gly Phe Val Leu Pro Ser Ala Gly Asn Tyr Ala Val Gly Met  
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Phe Phe Leu Pro Thr Val Glu Ser Arg Arg Glu Glu Ser Lys Asn Val  
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Phe Thr Lys Val Ala Glu Ser Leu Gly His Ser Val Leu Gly Trp Arg  
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Leu Val Pro Thr Asp Asn Ser Gly Leu Gly Asn Ser Ala Leu Gln Thr  
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Glu Pro Ile Ile Ala Gln Val Phe Leu Thr Pro Thr Thr Lys Ser Lys  
245 250 255

Ala Asp Phe Glu Gln Gln Met Tyr Ile Leu Arg Arg Val Ser Met Val  
260 265 270

Ala Ile Arg Ala Ala Leu Asn Leu Gln His Gly Ala Met Lys Asp Phe  
275 280 285



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 Thr Phe Pro Ser Trp Asp Arg Ala Gln Pro Met Arg Val Leu Gly His  
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Tyr Phe Lys Gln Met Phe Ala Gln Val Thr Asn Pro Pro Ile Asp Pro  
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Ile Arg Glu Lys Ile Val Thr Ser Met Glu Cys Met Ile Gly Pro Glu  
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Asn Tyr Arg Gly Trp Arg Thr Lys Val Leu Asp Ile Thr Tyr Ala Lys  
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Glu Arg Gly Thr Lys Gly Leu Glu Glu Thr Leu Asp Arg Ile Cys Asp  
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Glu Ala Asn Glu Ala Ile Lys Glu Gly Tyr Thr Leu Leu Val Leu Ser  
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	1070					1075					1080			
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1515

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Arg	Asp	Leu	Ser	Gly	Val	His	Phe	Ala	Met	Glu	Phe	Leu	His	Ala
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 2045 2050 2055  
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 2060 2065 2070  
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&lt;211&gt; 795

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Glu Asp Ala Ile Arg Lys Leu Asp Asn Phe Pro Phe Gly Tyr Glu Lys
Page 1139

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 Thr Gly Gly Thr Leu Ala Gly Val Ser Arg Phe Leu Gln Asp Lys Asn  
 260 265 270

Glu Arg Val Lys Cys Phe Leu Ile Asp Pro Pro Gly Ser Gly Leu Tyr  
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Asn Lys Val Thr Arg Gly Val Met Tyr Thr Arg Glu Glu Ala Glu Gly  
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Arg Arg Leu Lys Asn Pro Phe Asp Thr Ile Thr Glu Gly Ile Gly Ile  
305 310 315 320

Asn Arg Leu Thr Lys Asn Phe Leu Met Ala Lys Leu Asp Gly Gly Phe  
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Arg Gly Thr Asp Lys Glu Ala Val Glu Met Ser Arg Phe Leu Leu Lys  
340 345 350

Asn Asp Gly Leu Phe Val Gly Ser Ser Ser Ala Met Asn Cys Val Gly  
355 360 365

Ala Val Arg Val Ala Gln Thr Leu Gly Pro Gly His Thr Ile Val Thr  
370 375 380

Ile Leu Cys Asp Ser Gly Met Arg His Leu Ser Lys Phe His Asp Pro  
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<211> 1776

<212> DNA

<213> Arabidopsis thaliana

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&lt;211&gt; 591

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 716

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 Thr Ser Val Ala Ala Ala Asn Leu Leu Pro Asn Val Pro Phe Ala Ser  
 35 40 45  
 Phe Ser Arg Ser Asp Lys Leu Gly Arg Val Ala Asp Trp Thr Arg Asn  
 50 55 60  
 Leu Ser Asn Pro Ser Ala Arg Pro Asn Thr Gly Ser Lys Ser Asp Pro  
 65 70 75 80  
 Ser Ala Val Phe Asp Phe Ser Ala Phe Ala Ile Asp Glu Gly Phe Gly  
 85 90 95  
 Leu Ala Ser Ser Gly Gly Asn Pro Asp Glu Asp Ala Ala Phe Arg Leu  
 100 105 110  
 Val Asp Gly Lys Pro Pro Pro Arg Pro Lys Phe Gly Pro Lys Trp Arg  
 115 120 125  
 Phe Asn Pro His His Asn Arg Asn Gln Leu Pro Gln Arg Arg Asp Glu  
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 Glu Val Glu Ala Lys Lys Arg Asp Ala Glu Lys Glu Arg Ala Arg Arg  
 145 150 155 160  
 Asp Arg Leu Tyr Asn Asn Asn Arg Asn Asn Ile His His Gln Arg Arg  
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 Glu Ala Ala Ala Phe Lys Ser Ser Val Asp Ile Gln Pro Glu Trp Asn  
 180 185 190  
 Met Leu Glu Gln Ile Pro Phe Ser Thr Phe Ser Lys Leu Ser Tyr Thr  
 195 200 205  
 Val Gln Glu Pro Glu Asp Leu Leu Leu Cys Gly Gly Leu Glu Tyr Tyr  
 210 215 220  
 Asn Arg Leu Phe Asp Arg Ile Thr Pro Lys Asn Glu Arg Arg Leu Glu  
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 Arg Phe Lys Asn Arg Asn Phe Phe Lys Val Thr Thr Ser Asp Asp Pro  
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Val Ile Arg Arg Leu Ala Lys Glu Asp Lys Ala Thr Val Phe Ala Thr  
260 265 270

Asp Ala Ile Leu Ala Ala Leu Met Cys Ala Pro Arg Ser Val Tyr Ser  
275 280 285

Trp Asp Ile Val Ile Gln Arg Val Gly Asn Lys Leu Phe Phe Asp Lys  
290 295 300

Arg Asp Gly Ser Gln Leu Asp Leu Leu Ser Val His Glu Thr Ser Gln  
305 310 315 320

Glu Pro Leu Pro Glu Ser Lys Asp Asp Ile Asn Ser Ala His Ser Leu  
325 330 335

Gly Val Glu Ala Ala Tyr Ile Asn Gln Asn Phe Ser Gln Gln Val Leu  
340 345 350

Val Arg Asp Gly Lys Lys Glu Thr Phe Asp Glu Ala Asn Pro Phe Ala  
355 360 365

Asn Glu Gly Glu Glu Ile Ala Ser Val Ala Tyr Arg Tyr Arg Arg Trp  
370 375 380

Lys Leu Asp Asp Asn Met His Leu Val Ala Arg Cys Glu Leu Gln Ser  
385 390 395 400

Val Ala Asp Leu Asn Asn Gln Arg Ser Phe Leu Thr Leu Asn Ala Leu  
405 410 415

Asn Glu Phe Asp Pro Lys Tyr Ser Gly Val Asp Trp Arg Gln Lys Leu  
420 425 430

Glu Thr Gln Arg Gly Ala Val Leu Ala Thr Glu Leu Lys Asn Asn Gly  
435 440 445

Asn Lys Leu Ala Lys Trp Thr Ala Gln Ala Leu Leu Ala Asn Ala Asp  
450 455 460

Met Met Lys Ile Gly Phe Val Ser Arg Val His Pro Arg Asp His Phe  
465 470 475 480

Asn His Val Ile Leu Ser Val Leu Gly Tyr Lys Pro Lys Asp Phe Ala  
485 490 495

Gly Gln Ile Asn Leu Asn Thr Ser Asn Met Trp Gly Ile Val Lys Ser  
500 505 510



Ile Val Asp Leu Cys Met Lys Leu Ser Glu Gly Lys Tyr Val Leu Val  
515 520 525

Lys Asp Pro Ser Lys Pro Gln Val Arg Ile Tyr Glu Val Pro Pro Asp  
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Ala Phe Glu Asn Asp Tyr Val Glu Glu Pro Leu Pro Glu Asp Glu Gln  
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942

&lt;210&gt; 718

&lt;211&gt; 313

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 718

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35 40 45Val Gln Pro Val Lys Ser Pro Val Thr Ile Cys Gly Asp Ile His Gly  
50 55 60Gln Phe His Asp Leu Ala Glu Leu Phe Arg Ile Gly Gly Met Cys Pro  
65 70 75 80Asp Thr Asn Tyr Leu Phe Met Gly Asp Tyr Val Asp Arg Gly Tyr Tyr  
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115 120 125Gln Val Tyr Gly Phe Tyr Asp Glu Cys Leu Arg Lys Tyr Gly Asn Ala  
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145 150 155 160Ala Leu Val Glu Ser Glu Ile Phe Cys Leu His Gly Gly Leu Ser Pro  
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180 185 190

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Val Pro His Glu Gly Pro Met Cys Asp Leu Leu Trp Ser Asp Pro Asp  
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Asp Arg Cys Gly Trp Gly Ile Ser Pro Arg Gly Ala Gly Tyr Thr Phe  
210 215 220

Gly Gln Asp Ile Ser Glu Gln Phe Asn His Thr Asn Asn Leu Lys Leu  
225 230 235 240

Ile Ala Arg Ala His Gln Leu Val Met Asp Gly Tyr Asn Trp Ala His  
245 250 255

Glu Gln Lys Val Val Thr Ile Phe Ser Ala Pro Asn Tyr Cys Tyr Arg  
260 265 270

Cys Gly Asn Met Ala Ser Ile Leu Glu Val Asp Asp Cys Arg Asn His  
275 280 285

Thr Phe Ile Gln Phe Glu Pro Ala Pro Arg Arg Gly Glu Pro Asp Val  
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<211> 1527

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<213> Arabidopsis thaliana

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gtagtgtcga ctcaaccaga atctgagcca gtaaacaca gtggagtctc gagtcaacca	600

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&lt;210&gt; 720

&lt;211&gt; 508

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 720

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Ser Pro Glu Leu Lys Leu Tyr Gln Ala Phe Ile Phe Ser Val Pro Ile
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Cys Phe Thr Phe Ile Ile Leu Phe Leu Phe Tyr Leu Ile Tyr Leu Arg
          35          40          45

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Arg Ser Ser Ser Asp Leu Ser Ser Leu Gly Met Arg Thr Thr Phe Ile
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Pro Gly Asn Ser Leu Ser Thr Ile Glu Leu Gly Leu Ser Lys Glu Leu
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Arg Glu Met Leu Pro Ile Val Val Phe Lys Glu Ser Phe Thr Val Met  
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Asp Ser Gln Cys Ser Val Cys Leu Gly Asp Tyr Gln Pro Asn Asp Lys  
100 105 110

Leu Gln Gln Ile Pro Val Cys Lys His Thr Phe His Met Asp Cys Ile  
115 120 125

Asp Leu Trp Leu Thr Ser His Thr Thr Cys Pro Leu Cys Arg Leu Ala  
130 135 140

Leu Ile Pro Ser Arg Ser Arg Gln Ser Gln Asp Asp Pro Val Pro Ser  
145 150 155 160

Leu Val Ser Pro Asp Glu Glu Val Ser Ser Gln Pro Glu Ser Glu Pro  
165 170 175

Val Asn His Arg Val Val Ser Thr Gln Pro Glu Ser Glu Pro Val Asn  
180 185 190

His Ser Gly Val Ser Ser Gln Pro Glu Ser Gln Pro Val Val Asn His  
195 200 205

Arg Gly Val Ser Ser Gln Pro Glu Ser Gln Pro Val Asn His Ile Asn  
210 215 220

Asp Gly His Glu Gln Gln Cys Asp Gln Asp Val Glu Gly Phe Lys Glu  
225 230 235 240

Met Glu Glu Asp Glu Arg Asn Asn Ile Gly Thr Ser Ser Ala Cys Cys  
245 250 255

Ser Cys Arg Thr Val His Tyr Cys Cys Val Ser Arg Asp Asn Gln Ile  
260 265 270

Met Tyr Ala Tyr Asn Asn Ala Gly Asp His Arg Asn Asn Glu Ser Leu  
275 280 285

Ala Ala Leu Cys Leu Glu Lys Thr Pro Pro Phe His Lys Trp Tyr Phe  
290 295 300

Glu Thr Arg Gly Lys Lys Thr Phe Gly Phe Leu Met Lys Asp Asp Phe  
305 310 315 320

Val Tyr Phe Ala Ile Val Asp Asp Val Phe Lys Lys Ser Ser Val Leu  
Page 1151

Asp Phe Leu Glu Lys Leu Arg Asp Glu Leu Lys Glu Ala Asn Lys Lys  
340 345 350

Asn Ser Arg Gly Ser Phe Ser Gly Ser Ile Ser Phe Ser Asn Val Gln  
355 360 365

Asp Gln Ile Val Arg Arg Leu Ile Ala Ser Leu Glu Phe Asp His Thr  
370 375 380

Cys Leu Pro Leu Ser Ser Pro Ser Ile Asp Gly Ala Glu Gln Ser Tyr  
385 390 395 400

Ala Ser Asn Ser Lys Ala Pro Leu Leu Gly Arg Ser Asn Lys Gln Asp  
405 410 415

Lys Lys Lys Gly Arg Asp His Ala His Ser Leu Arg Gly Ile Glu Ile  
420 425 430

Glu Glu His Arg Lys Ser Asn Asp Arg Gly Asn Val Thr Glu Cys Ser  
435 440 445

Asn Ala Ser Ser Glu Ser Ala Thr Tyr Val Pro Arg Arg Gly Arg Ser  
450 455 460

Gly Gly Ser Gln Ser Ile Glu Arg Lys Trp Arg Arg Gln Val Lys Ile  
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Val Leu Ala Ile Asp Ile Ala Ile Cys Leu Thr Leu Leu Gly Val Trp  
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<211> 1005

<212> DNA

<213> Arabidopsis thaliana

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ggtttcgtcg agtcaattca accgactccc gccgcttatt catcgccggc gccaccgcag 180  
Page 1152

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<211> 334

<212> PRT

<213> *Arabidopsis thaliana*

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Val Val Cys Cys Glu Cys Asn Lys Gly Phe Val Glu Ser Ile Gln Pro  
35 40 45

Thr Pro Ala Ala Tyr Ser Ser Pro Ala Pro Pro Gln Pro Leu Ser Pro  
50 55 60

Asp Leu Asn Val Glu Asp Ser Ser Ile Gly Ser His Phe Leu Gln Met  
65 70 75 80

Leu Arg Leu Leu Ala His Ala Pro Ser Gln Arg Ser Pro Pro Arg His  
Page 1153

Leu Asp Val Leu Ser Tyr Glu Asp Asp Phe Phe Arg Leu Glu Leu Asn  
100 105 110

Ser Arg Asn Glu Ile Asp Asp Asp Glu Asp Glu Asp Glu Asp Asp Gly  
115 120 125

Asp Glu Glu Glu Glu Asp Glu Glu Glu Asn Leu Thr Val Asn Asp Glu  
130 135 140

Glu Asp Glu Glu Asp Asp Leu Arg Arg Arg Asn Arg Phe Pro Leu Thr  
145 150 155 160

Thr Thr Gln Ser Arg Thr Gly Arg Asn Arg Ile Leu Asp Trp Ala Glu  
165 170 175

Ile Leu Met Gly Ile Glu Asp Asn Ser Ile Glu Phe Arg Met Glu Ser  
180 185 190

Asp Arg Tyr Ala Gly Asn Pro Ala Asp Tyr Ile Asp Asp Ala Ala Gly  
195 200 205

Tyr Glu Ala Leu Leu Gln Asn Leu Ala Glu Gly Asp Gly Gly Gly Gly  
210 215 220

Gly Gly Arg Arg Gly Ala Pro Pro Ala Ala Lys Ser Ala Ile Glu Ala  
225 230 235 240

Leu Glu Thr Phe Glu Val Ser Ser Ser Glu Gly Glu Met Val Met Val  
245 250 255

Cys Ala Val Cys Lys Asp Gly Met Val Met Gly Glu Thr Gly Lys Lys  
260 265 270

Leu Pro Cys Gly His Cys Tyr His Gly Asp Cys Ile Val Pro Trp Leu  
275 280 285

Gly Thr Arg Asn Ser Cys Pro Val Cys Arg Phe Gln Leu Glu Thr Asp  
290 295 300

Asp Ala Glu Tyr Glu Glu Glu Arg Lys Lys Arg Thr Ser Thr Val Ser  
305 310 315 320

Asp Ser Ala Ala Ala Ser Ser Ser Ser Ser Thr Ser Arg Tyr  
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&lt;210&gt; 723

&lt;211&gt; 2991

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 723

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gaatatagcc gtgaagaaat tcttggaaga aattgcaggt ttctacaagg tccagagact   1560

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&lt;210&gt; 724

&lt;211&gt; 996

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 724

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047-E2F-PCT.ST25.txt

Pro Arg Asp Thr Arg Gly Ser Leu Glu Val Phe Asn Pro Ser Thr Gln  
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 Leu Thr Arg Pro Asp Asn Pro Val Phe Arg Pro Glu Pro Pro Ala Trp  
 35 40 45  
 Gln Asn Leu Ser Asp Pro Arg Gly Thr Ser Pro Gln Pro Arg Pro Gln  
 50 55 60  
 Gln Glu Pro Ala Pro Ser Asn Pro Val Arg Ser Asp Gln Glu Ile Ala  
 65 70 75 80  
 Val Thr Thr Ser Trp Met Ala Leu Lys Asp Pro Ser Pro Glu Thr Ile  
 85 90 95  
 Ser Lys Lys Thr Ile Thr Ala Glu Lys Pro Gln Lys Ser Ala Val Ala  
 100 105 110  
 Ala Glu Gln Arg Ala Ala Glu Trp Gly Leu Val Leu Lys Thr Asp Thr  
 115 120 125  
 Lys Thr Gly Lys Pro Gln Gly Val Gly Val Arg Asn Ser Gly Gly Thr  
 130 135 140  
 Glu Asn Asp Pro Asn Gly Lys Lys Thr Thr Ser Gln Arg Asn Ser Gln  
 145 150 155 160  
 Asn Ser Cys Arg Ser Ser Gly Glu Met Ser Asp Gly Asp Val Pro Gly  
 165 170 175  
 Gly Arg Ser Gly Ile Pro Arg Val Ser Glu Asp Leu Lys Asp Ala Leu  
 180 185 190  
 Ser Thr Phe Gln Gln Thr Phe Val Val Ser Asp Ala Thr Lys Pro Asp  
 195 200 205  
 Tyr Pro Ile Met Tyr Ala Ser Ala Gly Phe Phe Asn Met Thr Gly Tyr  
 210 215 220  
 Thr Ser Lys Glu Val Val Gly Arg Asn Cys Arg Phe Leu Gln Gly Ser  
 225 230 235 240  
 Gly Thr Asp Ala Asp Glu Leu Ala Lys Ile Arg Glu Thr Leu Ala Ala  
 245 250 255  
 Gly Asn Asn Tyr Cys Gly Arg Ile Leu Asn Tyr Lys Lys Asp Gly Thr  
 Page 1157

Ser Phe Trp Asn Leu Leu Thr Ile Ala Pro Ile Lys Asp Glu Ser Gly  
 275 280 285  
 Lys Val Leu Lys Phe Ile Gly Met Gln Val Glu Val Ser Lys His Thr  
 290 295 300  
 Glu Gly Ala Lys Glu Lys Ala Leu Arg Pro Asn Gly Leu Pro Glu Ser  
 305 310 315  
 Leu Ile Arg Tyr Asp Ala Arg Gln Lys Asp Met Ala Thr Asn Ser Val  
 325 330 335  
 Thr Glu Leu Val Glu Ala Val Lys Arg Pro Arg Ala Leu Ser Glu Ser  
 340 345 350  
 Thr Asn Leu His Pro Phe Met Thr Lys Ser Glu Ser Asp Glu Leu Pro  
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 Lys Lys Pro Ala Arg Arg Met Ser Glu Asn Val Val Pro Ser Gly Arg  
 370 375 380  
 Arg Asn Ser Gly Gly Gly Arg Arg Asn Ser Met Gln Arg Ile Asn Glu  
 385 390 395 400  
 Ile Pro Glu Lys Lys Ser Arg Lys Ser Ser Leu Ser Phe Met Gly Ile  
 405 410 415  
 Lys Lys Lys Ser Glu Ser Leu Asp Glu Ser Ile Asp Asp Gly Phe Ile  
 420 425 430  
 Glu Tyr Gly Glu Glu Asp Asp Glu Ile Ser Asp Arg Asp Glu Arg Pro  
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 Glu Ser Val Asp Asp Lys Val Arg Gln Lys Glu Met Arg Lys Gly Ile  
 450 455 460  
 Asp Leu Ala Thr Thr Leu Glu Arg Ile Glu Lys Asn Phe Val Ile Thr  
 465 470 475 480  
 Asp Pro Arg Leu Pro Asp Asn Pro Ile Ile Phe Ala Ser Asp Ser Phe  
 485 490 495  
 Leu Glu Leu Thr Glu Tyr Ser Arg Glu Glu Ile Leu Gly Arg Asn Cys  
 500 505 510

Arg Phe Leu Gln Gly Pro Glu Thr Asp Leu Thr Thr Val Lys Lys Ile  
 515 520 525  
 Arg Asn Ala Ile Asp Asn Gln Thr Glu Val Thr Val Gln Leu Ile Asn  
 530 535 540  
 Tyr Thr Lys Ser Gly Lys Lys Phe Trp Asn Ile Phe His Leu Gln Pro  
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 Met Arg Asp Gln Lys Gly Glu Val Gln Tyr Phe Ile Gly Val Gln Leu  
 565 570 575  
 Asp Gly Ser Lys His Val Glu Pro Val Arg Asn Val Ile Glu Glu Thr  
 580 585 590  
 Ala Val Lys Glu Gly Glu Asp Leu Val Lys Lys Thr Ala Val Asn Ile  
 595 600 605  
 Asp Glu Ala Val Arg Glu Leu Pro Asp Ala Asn Met Thr Pro Glu Asp  
 610 615 620  
 Leu Trp Ala Asn His Ser Lys Val Val His Cys Lys Pro His Arg Lys  
 625 630 635 640  
 Asp Ser Pro Pro Trp Ile Ala Ile Gln Lys Val Leu Glu Ser Gly Glu  
 645 650 655  
 Pro Ile Gly Leu Lys His Phe Lys Pro Val Lys Pro Leu Gly Ser Gly  
 660 665 670  
 Asp Thr Gly Ser Val His Leu Val Glu Leu Val Gly Thr Asp Gln Leu  
 675 680 685  
 Phe Ala Met Lys Ala Met Asp Lys Ala Val Met Leu Asn Arg Asn Lys  
 690 695 700  
 Val His Arg Ala Arg Ala Glu Arg Glu Ile Leu Asp Leu Leu Asp His  
 705 710 715 720  
 Pro Phe Leu Pro Ala Leu Tyr Ala Ser Phe Gln Thr Lys Thr His Ile  
 725 730 735  
 Cys Leu Ile Thr Asp Tyr Tyr Pro Gly Gly Glu Leu Phe Met Leu Leu  
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 Asp Arg Gln Pro Arg Lys Val Leu Lys Glu Asp Ala Val Arg Phe Tyr  
 755 760 765

047-E2F-PCT.ST25.txt

Ala Ala Gln Val Val Val Ala Leu Glu Tyr Leu His Cys Gln Gly Ile  
770 775

Ile Tyr Arg Asp Leu Lys Pro Glu Asn Val Leu Ile Gln Gly Asn Gly  
785 790 795 800

Asp Ile Ser Leu Ser Asp Phe Asp Leu Ser Cys Leu Thr Ser Cys Lys  
805 810 815

Pro Gln Leu Leu Ile Pro Ser Ile Asp Glu Lys Lys Lys Lys Gln  
820 825 830

Gln Lys Ser Gln Gln Thr Pro Ile Phe Met Ala Glu Pro Met Arg Ala  
835 840 845

Ser Asn Ser Phe Val Gly Thr Glu Glu Tyr Ile Ala Pro Glu Ile Ile  
850 855 860

Ser Gly Ala Gly His Thr Ser Ala Val Asp Trp Trp Ala Leu Gly Ile  
865 870 875 880

Leu Met Tyr Glu Met Leu Tyr Gly Tyr Thr Pro Phe Arg Gly Lys Thr  
885 890 895

Arg Gln Lys Thr Phe Thr Asn Val Leu Gln Lys Asp Leu Lys Phe Pro  
900 905 910

Ala Ser Ile Pro Ala Ser Leu Gln Val Lys Gln Leu Ile Phe Arg Leu  
915 920 925

Leu Gln Arg Asp Pro Lys Lys Arg Leu Gly Cys Phe Glu Gly Ala Asn  
930 935 940

Glu Val Lys Gln His Ser Phe Phe Lys Gly Ile Asn Trp Ala Leu Ile  
945 950 955 960

Arg Cys Thr Asn Pro Pro Glu Leu Glu Thr Pro Ile Phe Ser Gly Glu  
965 970 975

Ala Glu Asn Gly Glu Lys Val Val Asp Pro Glu Leu Glu Asp Leu Gln  
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Thr Asn Val Phe  
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<210> 725

&lt;211&gt; 621

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 725

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tcaactcaac  ctgcacgtat  ggaggaatct  ggattcgaga  gcacaactat  ttccgatgtc      180
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gtttatgatg  ctgttaaatc  catgacacaa  cacaatgttg  gtgccttggt  ggttgtgaaa      300
cctggtgagc  aacaagctct  tgctggtatc  attacagaga  gagattatct  acggaagatc      360
attgtgcaag  ggagatcatc  caaatcaaca  aaagttggag  acattatgac  tgaagagaat      420
aagcttatca  ctgtgacacc  ggagaccaag  gtcttgctg  ctatgcaact  gatgacagat      480
aaccgaatca  ggcataattcc  ggtaatcaaa  gacaagggca  tgattggaat  ggtgtccata      540
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&lt;210&gt; 726

&lt;211&gt; 206

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 726

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Met Gln Gly Val  Ile Arg Ser Phe Val  Ser Gly Gly Asn Val  Val Lys
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Gly Ser Val  Leu Gln His Leu Arg Val  Ile Asn Pro Ala  Ile Gln Pro
 20         25         30

Ser Val  Phe Cys Ser Arg Ser  Glu Ser Thr Gln Pro  Ala Arg Met Glu
 35         40         45

Glu Ser Gly Phe Glu Ser  Thr Thr Ile Ser Asp Val  Met Lys Ser Lys
 50         55         60

Gly Lys Ser Ala Asp Gly Ser Trp Leu Trp  Cys Thr Thr Asp Asp Thr
 65         70         75         80

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047-E2F-PCT.ST25.txt

Val Tyr Asp Ala Val Lys Ser Met Thr Gln His Asn Val Gly Ala Leu  
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115 120  
Ser Thr Lys Val Gly Asp Ile Met Thr Glu Glu Asn Lys Leu Ile Thr  
130 135 140  
Val Thr Pro Glu Thr Lys Val Leu Arg Ala Met Gln Leu Met Thr Asp  
145 150 155 160  
Asn Arg Ile Arg His Ile Pro Val Ile Lys Asp Lys Gly Met Ile Gly  
165 170 175  
Met Val Ser Ile Gly Asp Val Val Arg Ala Val Val His Glu His Arg  
180 185 190  
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<210> 727

<211> 867

<212> DNA

<213> Arabidopsis thaliana

<400> 727

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gctctttcgt ttgggtacaa aaatgttggg tcactgaagt gtggctcgag caattggccg	180
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tcaggtggtc ctggcgggtt aggtggttca ggcggtggtg gtggtggttc cggcggcggt	300
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cttctctcaa actctcgtt ttgacacaa gctgtgaccg cagcactttt gaacctcgtt	420
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047-E2F-PCT.ST25.txt

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 gcaaattggc agctatggat accatttcag tttcttaact tcagatttgt tccacagaac 780  
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<210> 728

<211> 288

<212> PRT

<213> Arabidopsis thaliana

<400> 728

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 20 25 30

Ile Thr Glu Gly Ser Ser Ser Lys Ala Leu Ser Phe Gly Tyr Lys Asn  
 35 40 45

Val Gly Ser Leu Lys Cys Gly Arg Ser Asn Trp Pro Gly Arg Ser Gly  
 50 55 60

Thr Ala Phe Gly His Leu Val Arg Val Ser Ala Val Pro Gly Gly Asn  
 65 70 75 80

Ser Gly Gly Ser Gly Gly Leu Gly Gly Ser Gly Gly Gly Gly Gly  
 85 90 95

Ser Gly Gly Gly Gly Gly Asp Gly Ser Asp Gly Lys Gly Lys Lys Trp  
 100 105 110

Ser Leu Leu Ser Trp Tyr Gln Ala Leu Leu Ser Asn Ser Pro Val Leu  
 115 120 125

Thr Lys Ala Val Thr Ala Ala Leu Leu Asn Leu Val Gly Asp Leu Ile  
 130 135 140

Cys Gln Leu Thr Ile Asn Lys Thr Ser Ser Leu Asp Lys Lys Arg Thr  
 145 150 155 160

047-E2F-PCT.ST25.txt

Leu Thr Phe Thr Phe Leu Gly Leu Gly Leu Val Gly Pro Thr Leu His  
165 170 175

Phe Trp Tyr Leu Tyr Leu Ser Lys Val Val Thr Ala Ser Gly Leu Ser  
180 185 190

Gly Ala Val Ile Arg Leu Leu Leu Asp Gln Phe Val Phe Ala Pro Ile  
195 200 205

Phe Val Gly Val Phe Leu Ser Ala Val Val Thr Leu Glu Gly Lys Pro  
210 215 220

Ser Asn Val Ile Pro Lys Leu Gln Gln Glu Trp Thr Gly Ala Met Ile  
225 230 235 240

Ala Asn Trp Gln Leu Trp Ile Pro Phe Gln Phe Leu Asn Phe Arg Phe  
245 250 255

Val Pro Gln Asn Tyr Gln Val Leu Ala Ser Asn Val Val Ala Leu Ala  
260 265 270

Trp Asn Val Ile Leu Ser Phe Lys Ala His Lys Glu Val Val Ala Lys  
275 280 285

<210> 729

<211> 1410

<212> DNA

<213> Arabidopsis thaliana

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ctatacggac ccaatgttca atgcagagga tgtgaccgga ataccgaaa ctgcaccgtc 540  
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047-E2F-PCT.ST25.txt

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<210> 730

<211> 469

<212> PRT

<213> Arabidopsis thaliana

<400> 730

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Ser Ala Val Lys Leu Pro Leu Ser Pro Phe Ser His Ser Asp Gln Ser  
 20 25 30

Pro Lys Asp Pro Tyr Leu Ser Leu Arg Arg Leu Ala Glu Ser Ser Ile  
 35 40 45

Ala Arg Ala His Lys Leu Lys His Gly Thr Ser Ile Lys Pro Asp Glu  
 50 55 60

Asp Ala Leu Ser Ser Thr Thr Thr Ala Ser Ala Thr Val Val Lys Ser  
 65 70 75 80

Pro Leu Ser Ala Lys Ser Tyr Gly Gly Tyr Ser Val Ser Leu Ser Phe  
 Page 1165

Gly Thr Pro Ser Gln Thr Ile Pro Phe Val Phe Asp Thr Gly Ser Ser  
 100 105 110  
 Leu Val Trp Leu Pro Cys Thr Ser Arg Tyr Leu Cys Ser Gly Cys Asp  
 115 120 125  
 Phe Ser Gly Leu Asp Pro Thr Leu Ile Pro Arg Phe Ile Pro Lys Asn  
 130 135 140  
 Ser Ser Ser Ser Lys Ile Ile Gly Cys Gln Ser Pro Lys Cys Gln Phe  
 145 150 155 160  
 Leu Tyr Gly Pro Asn Val Gln Cys Arg Gly Cys Asp Pro Asn Thr Arg  
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 Asn Cys Thr Val Gly Cys Pro Pro Tyr Ile Leu Gln Tyr Gly Leu Gly  
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 Ser Thr Ala Gly Val Leu Ile Thr Glu Lys Leu Asp Phe Pro Asp Leu  
 195 200 205  
 Thr Val Pro Asp Phe Val Val Gly Cys Ser Ile Ile Ser Thr Arg Gln  
 210 215 220  
 Pro Ala Gly Ile Ala Gly Phe Gly Arg Gly Pro Val Ser Leu Pro Ser  
 225 230 235 240  
 Gln Met Asn Leu Lys Arg Phe Ser His Cys Leu Val Ser Arg Arg Phe  
 245 250 255  
 Asp Asp Thr Asn Val Thr Thr Asp Leu Asp Leu Asp Thr Gly Ser Gly  
 260 265 270  
 His Asn Ser Gly Ser Lys Thr Pro Gly Leu Thr Tyr Thr Pro Phe Arg  
 275 280 285  
 Lys Asn Pro Asn Val Ser Asn Lys Ala Phe Leu Glu Tyr Tyr Tyr Leu  
 290 295 300  
 Asn Leu Arg Arg Ile Tyr Val Gly Arg Lys His Val Lys Ile Pro Tyr  
 305 310 315 320  
 Lys Tyr Leu Ala Pro Gly Thr Asn Gly Asp Gly Gly Ser Ile Val Asp  
 325 330 335

Ser Gly Ser Thr Phe Thr Phe Met Glu Arg Pro Val Phe Glu Leu Val  
 340 345 350

Ala Glu Glu Phe Ala Ser Gln Met Ser Asn Tyr Thr Arg Glu Lys Asp  
 355 360 365

Leu Glu Lys Glu Thr Gly Leu Gly Pro Cys Phe Asn Ile Ser Gly Lys  
 370 375 380

Gly Asp Val Thr Val Pro Glu Leu Ile Phe Glu Phe Lys Gly Gly Ala  
 385 390 395 400

Lys Leu Glu Leu Pro Leu Ser Asn Tyr Phe Thr Phe Val Gly Asn Thr  
 405 410 415

Asp Thr Val Cys Leu Thr Val Val Ser Asp Lys Thr Val Asn Pro Ser  
 420 425 430

Gly Gly Thr Gly Pro Ala Ile Ile Leu Gly Ser Phe Gln Gln Gln Asn  
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Tyr Leu Val Glu Tyr Asp Leu Glu Asn Asp Arg Phe Gly Phe Ala Lys  
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Lys Lys Cys Ser Pro  
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<210> 731

<211> 423

<212> DNA

<213> Arabidopsis thaliana

<400> 731

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caattaggcg ttgcctcttg gcccaagtgg gaagggtgct caagcaagtt tccatggggg	240
tttaagaaga cagagacaat atatttcatt gaagggaag tgaaagtga ttagacgga	300
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047-E2F-PCT.ST25.txt

<210> 732

<211> 140

<212> PRT

<213> Arabidopsis thaliana

<400> 732

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Val Ser Val Ser Ser Asp Ser Glu Ile Pro Thr Glu Ile His Gly Val  
35 40 45

Lys Ile Leu Arg Gln Ala Ser Asp Thr Lys Leu Ala Gln Leu Gly Val  
50 55 60

Ala Ser Trp Pro Lys Trp Glu Gly Ala Pro Ser Lys Phe Pro Trp Glu  
65 70 75 80

Phe Lys Lys Thr Glu Thr Ile Tyr Phe Met Glu Gly Lys Val Lys Val  
85 90 95

Asn Val Asp Gly Tyr Asp Glu Glu Glu Glu Thr Phe Glu Ile Gly Lys  
100 105 110

Gly Asp Val Val Val Phe Pro Lys Asp Met Lys Val Val Trp Glu Ile  
115 120 125

Thr Glu Ala Val Lys Lys Gln Tyr Ser Leu Glu Glu  
130 135 140

<210> 733

<211> 1500

<212> DNA

<213> Arabidopsis thaliana

<400> 733

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047-E2F-PCT.ST25.txt

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 tatgatattc cggccaaagc catcattcag gtgaacgcac gggcggtttc tcgtgacaca 1200  
 gccgcgtggg gagacaaccc taatgagttc attccagaga ggttcatgaa cgagcacaaa 1260  
 ggagtggact tcaagggccca agattttgag ctctacactt tcgggtcggg ccggagaatg 1320  
 tgcccgccca tgcattcttg gattgcaatg gtatagatag ctttcgctaa ccttctctac 1380  
 aaatttgact ggagtctacc taaagggatt aaaccagagg atataaagat ggagctcatg 1440  
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<210> 734

<211> 499

<212> PRT

<213> Arabidopsis thaliana

<400> 734

Met Asp Leu Leu Leu Ile Ile Ala Gly Leu Val Ala Ala Ala Ala Phe  
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Phe Phe Leu Arg Ser Thr Thr Lys Lys Ser Leu Arg Leu Pro Pro Gly  
 20 25 30  
 Pro Lys Gly Leu Pro Ile Ile Gly Asn Leu His Gln Met Glu Lys Phe  
 35 40 45  
 Asn Pro Gln His Phe Leu Phe Arg Leu Ser Lys Leu Tyr Gly Pro Ile  
 50 55 60  
 Phe Thr Met Lys Ile Gly Gly Arg Arg Leu Ala Val Ile Ser Ser Ala  
 65 70 75 80  
 Glu Leu Ala Lys Glu Leu Leu Lys Thr Gln Asp Leu Asn Phe Thr Ala  
 85 90 95  
 Arg Pro Leu Leu Lys Gly Gln Gln Thr Met Ser Tyr Gln Gly Arg Glu  
 100 105 110  
 Leu Gly Phe Gly Gln Tyr Thr Ala Tyr Tyr Arg Glu Met Arg Lys Met  
 115 120 125  
 Cys Met Val Asn Leu Phe Ser Pro Asn Arg Val Ala Ser Phe Arg Pro  
 130 135 140  
 Val Arg Glu Glu Glu Cys Gln Arg Met Met Asp Lys Ile Tyr Lys Ala  
 145 150 155 160  
 Ala Asp Gln Ser Gly Thr Val Asp Leu Ser Glu Leu Leu Leu Ser Phe  
 165 170 175  
 Thr Asn Cys Val Val Cys Arg Gln Ala Phe Gly Lys Arg Tyr Asn Glu  
 180 185 190  
 Tyr Gly Thr Glu Met Lys Arg Phe Ile Asp Ile Leu Tyr Glu Thr Gln  
 195 200 205  
 Ala Leu Leu Gly Thr Leu Phe Phe Ser Asp Leu Phe Pro Tyr Phe Gly  
 210 215 220  
 Phe Leu Asp Asn Leu Thr Gly Leu Ser Ala Arg Leu Lys Lys Ala Phe  
 225 230 235 240  
 Lys Glu Leu Asp Thr Tyr Leu Gln Glu Leu Leu Asp Glu Thr Leu Asp  
 245 250 255  
 Pro Asn Arg Pro Lys Gln Glu Thr Glu Ser Phe Ile Asp Leu Leu Met  
 260 265 270



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Gln Ile Tyr Lys Asp Gln Pro Phe Ser Ile Lys Phe Thr His Glu Asn  
275 280 285

Val Lys Ala Met Ile Leu Asp Ile Val Val Pro Gly Thr Asp Thr Ala  
290 295 300

Ala Ala Val Val Val Trp Ala Met Thr Tyr Leu Ile Lys Tyr Pro Glu  
305 310 315 320

Ala Met Lys Lys Ala Gln Asp Glu Val Arg Ser Val Ile Gly Asp Lys  
325 330 335

Gly Tyr Val Ser Glu Glu Asp Ile Pro Asn Leu Pro Tyr Leu Lys Ala  
340 345 350

Val Ile Lys Glu Ser Leu Arg Leu Glu Pro Val Ile Pro Ile Leu Leu  
355 360 365

His Arg Glu Thr Ile Ala Asp Ala Lys Ile Gly Gly Tyr Asp Ile Pro  
370 375 380

Ala Lys Thr Ile Ile Gln Val Asn Ala Trp Ala Val Ser Arg Asp Thr  
385 390 395 400

Ala Ala Trp Gly Asp Asn Pro Asn Glu Phe Ile Pro Glu Arg Phe Met  
405 410 415

Asn Glu His Lys Gly Val Asp Phe Lys Gly Gln Asp Phe Glu Leu Leu  
420 425 430

Pro Phe Gly Ser Gly Arg Arg Met Cys Pro Ala Met His Leu Gly Ile  
435 440 445

Ala Met Val Glu Ile Pro Phe Ala Asn Leu Leu Tyr Lys Phe Asp Trp  
450 455 460

Ser Leu Pro Lys Gly Ile Lys Pro Glu Asp Ile Lys Met Asp Val Met  
465 470 475 480

Thr Gly Leu Ala Met His Lys Lys Glu His Leu Val Leu Ala Pro Thr  
485 490 495

Lys His Ile

&lt;211&gt; 567

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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gcggcgggtg attctgttcc ggtaagaag gagaagacga gtcctgttcc gcggcgggtg      180
acggcggcga agggaaagca ttatagagga gtgagacaaa ggccgtgggg gaaatttgcg      240
gcggagatta gagaccggc gaagaacgga gctagggttt ggttaggaac gtttgagacg      300
gcggaggacg cggcgttggc ttacgacaga gctgctttca ggatgcgtgg tccccgcgct      360
ttgtgaattt ttccgttgag agttaattca ggagaacccg acccggttcg aatcaagtcc      420
aagagatctt ctttttcttc ttctaacgag aacggagctc cgaagaagag gagaacggtg      480
gccgccgggtg gtggaatgga taagggttg acggtgaagt gcgaggttgt tgaagtggca      540
cgtggcgatc gttattggtt ttataaa
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&lt;210&gt; 736

&lt;211&gt; 188

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 736

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Met Leu Val Tyr Gly Ile Leu Asn Asp Ala Phe His Gly Gly Trp Glu
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Pro Ser Ser Ser Ser Ser Asp Glu Asp Arg Ser Ser Phe Pro Ser Val
          20           25           30
Lys Ile Glu Thr Pro Glu Ser Phe Ala Ala Val Asp Ser Val Pro Val
          35           40           45
Lys Lys Glu Lys Thr Ser Pro Val Ser Ala Ala Val Thr Ala Ala Lys
          50           55           60
Gly Lys His Tyr Arg Gly Val Arg Gln Arg Pro Trp Gly Lys Phe Ala
65           70           75           80

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Ala Glu Ile Arg Asp Pro Ala Lys Asn Gly Ala Arg Val Trp Leu Gly  
                   85                  90                  95

Thr Phe Glu Thr Ala Glu Asp Ala Ala Leu Ala Tyr Asp Arg Ala Ala  
                   100                  105                  110

Phe Arg Met Arg Gly Ser Arg Ala Leu Leu Asn Phe Pro Leu Arg Val  
                   115                  120                  125

Asn Ser Gly Glu Pro Asp Pro Val Arg Ile Lys Ser Lys Arg Ser Ser  
                   130                  135                  140

Phe Ser Ser Ser Asn Glu Asn Gly Ala Pro Lys Lys Arg Arg Thr Val  
                   145                  150                  155                  160

Ala Ala Gly Gly Gly Met Asp Lys Gly Leu Thr Val Lys Cys Glu Val  
                   165                  170                  175

Val Glu Val Ala Arg Gly Asp Arg Leu Leu Val Leu  
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<210> 737

<211> 795

<212> DNA

<213> Arabidopsis thaliana

<400> 737

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gcttaccgtc caccagctgg tcgtcgtcgt actagccata cccgtggatg ttgctgccgt	180
tgctgttgct ggacgatatt cgtaatcatc ctcttactcc tcatcgctgc cgccgcatca	240
gccgtcgat acctaatacta ccgtcctcaa cgacctagct tcaccgtctc tgaactcaaa	300
atctccactc tcaacttcac atccgccgtt cgctcacca ccgccatttc cctctccgtc	360
atcgccagaa accctaacaa aaacgttgga ttcatctacg acgtcaccga catcacactc	420
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ttttctcacg ggaagaagaa cagactacg cttagaagta cgatcggaag tcctccggat	540
gaactcgatg agatctcggc gggtgaagctg aaaggagatc tgaaggcgaa gaaagcagtg	600
gcgattaaga ttgttttgaa ctggaagtg aaagtgaaga tgggagctct aaaaactcct	660
aatcaggaa ttgggttac ttgtgaaggg attaaagtgg tggtccgcac gggaaagaag	720

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<210> 738

<211> 264

<212> PRT

<213> Arabidopsis thaliana

<400> 738

Met Thr Asp Asp Arg Val Tyr Pro Ala Ser Lys Pro Pro Ala Ile Val  
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Gly Gly Gly Ala Pro Thr Thr Asn Pro Thr Phe Pro Ala Asn Lys Ala  
 20 25 30

Gln Leu Tyr Asn Ala Asn Arg Pro Ala Tyr Arg Pro Pro Ala Gly Arg  
 35 40 45

Arg Arg Thr Ser His Thr Arg Gly Cys Cys Cys Arg Cys Cys Cys Trp  
 50 55 60

Thr Ile Phe Val Ile Ile Leu Leu Leu Leu Ile Val Ala Ala Ala Ser  
 65 70 75 80

Ala Val Val Tyr Leu Ile Tyr Arg Pro Gln Arg Pro Ser Phe Thr Val  
 85 90 95

Ser Glu Leu Lys Ile Ser Thr Leu Asn Phe Thr Ser Ala Val Arg Leu  
 100 105 110

Thr Thr Ala Ile Ser Leu Ser Val Ile Ala Arg Asn Pro Asn Lys Asn  
 115 120 125

Val Gly Phe Ile Tyr Asp Val Thr Asp Ile Thr Leu Tyr Lys Ala Ser  
 130 135 140

Thr Gly Gly Asp Asp Asp Val Val Ile Gly Lys Gly Thr Ile Ala Ala  
 145 150 155 160

Phe Ser His Gly Lys Lys Asn Thr Thr Thr Leu Arg Ser Thr Ile Gly  
 165 170 175

Ser Pro Pro Asp Glu Leu Asp Glu Ile Ser Ala Gly Lys Leu Lys Gly  
 180 185 190

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Asp Leu Lys Ala Lys Lys Ala Val Ala Ile Lys Ile Val Leu Asn Ser  
195 200 205

Lys Val Lys Val Lys Met Gly Ala Leu Lys Thr Pro Lys Ser Gly Ile  
210 215 220

Arg Val Thr Cys Glu Gly Ile Lys Val Val Ala Pro Thr Gly Lys Lys  
225 230 235 240

Ala Thr Thr Ala Thr Thr Ser Ala Ala Lys Cys Lys Val Asp Pro Arg  
245 250 255

Phe Lys Ile Trp Lys Ile Thr Phe  
260

<210> 739

<211> 822

<212> DNA

<213> Arabidopsis thaliana

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atctaccagg cgatttcaca acaggcttgc aaatcacaga acttgaactc cgccgggtccg 180  
ttcgatagtt gcgaagacct tccggtactc aattcctacc tccattacac ctacaattcc 240  
tcaaattcat ctctctccgt cgctttcgtc gccactccat ctcaagccaa cgggtggctgg 300  
gtcgcttggt ctattaaccc tacggggact aagatggctg gttctcaagc ctctctcgct 360  
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cctgataatt tgggctccca ccgtgtgttg agtttcacag aagatgcagc accgggctct 660  
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gcggcgggag gtccagggaa cgcgggttca ttgacgagga acgtaattt tggggtcaat 780  
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<210> 740

&lt;211&gt; 273

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 740

Met Ser Leu Cys Leu Lys Ile Pro Leu Ile Lys His Gln Thr Thr Pro  
 1 5 10 15

Glu Gln Asn Ser Ala Met Ala Ser Ser Ser Ser Leu Leu Ile Leu  
 20 25 30

Ala Val Ala Cys Phe Val Ser Leu Ile Ser Pro Ala Ile Ser Gln Gln  
 35 40 45

Ala Cys Lys Ser Gln Asn Leu Asn Ser Ala Gly Pro Phe Asp Ser Cys  
 50 55 60

Glu Asp Leu Pro Val Leu Asn Ser Tyr Leu His Tyr Thr Tyr Asn Ser  
 65 70 75 80

Ser Asn Ser Ser Leu Ser Val Ala Phe Val Ala Thr Pro Ser Gln Ala  
 85 90 95

Asn Gly Gly Trp Val Ala Trp Ala Ile Asn Pro Thr Gly Thr Lys Met  
 100 105 110

Ala Gly Ser Gln Ala Phe Leu Ala Tyr Arg Ser Gly Gly Gly Ala Ala  
 115 120 125

Pro Val Val Lys Thr Tyr Asn Ile Ser Ser Tyr Ser Ser Leu Val Glu  
 130 135 140

Gly Lys Leu Ala Phe Asp Phe Trp Asn Leu Arg Ala Glu Ser Leu Ser  
 145 150 155 160

Gly Gly Arg Ile Ala Ile Phe Thr Thr Val Lys Val Pro Ala Gly Ala  
 165 170 175

Asp Ser Val Asn Gln Val Trp Gln Ile Gly Gly Asn Val Thr Asn Gly  
 180 185 190

Arg Pro Gly Val His Pro Phe Gly Pro Asp Asn Leu Gly Ser His Arg  
 195 200 205

Val Leu Ser Phe Thr Glu Asp Ala Ala Pro Gly Ser Ala Pro Ser Pro  
 210 215 220

Gly Ser Ala Pro Ala Pro Gly Thr Ser Gly Ser Thr Thr Pro Gly Thr  
 225 230 235 240

Ala Ala Gly Gly Pro Gly Asn Ala Gly Ser Leu Thr Arg Asn Val Asn  
 245 250 255

Phe Gly Val Asn Leu Gly Ile Leu Val Leu Leu Gly Ser Ile Phe Ile  
 260 265 270

Phe

<210> 741

<211> 1884

<212> DNA

<213> Arabidopsis thaliana

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 tgtgtgttg gtctgttact gcttcttttg attctgttct gtctctgtag aaagagaaag 840  
 aaagaagaga acgttccatc taggaatggt gaagctcctg tcgctgtctg gacttctcc 900  
 gctgtctatac caaaggaac ggtggttggt gtcccgcgg ctaaggctac ggggtcggag 960

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aaggcaagct ttgagcatgg gttagtgggt gctgtgaaac ggtaagaga tgttgtggtg 1140
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aatgagaaca tcattcgctt attgaagatc ggtatgagct gtacggctca gttcccagat 1800
agtcgtcctt cgatggctga agtcaccaga ctattgagg aggtttctca ttcattctggc 1860
tcccaaatac ctgtatccga ctga 1884

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&lt;210&gt; 742

&lt;211&gt; 627

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 742

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Met Lys Tyr Lys Arg Lys Leu Ser Leu Ser Val Val Phe Leu Phe Val
1      5      10      15

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Phe Tyr Leu Ala Ala Val Thr Ser Asp Leu Glu Ser Asp Arg Arg Ala
20      25      30

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Leu Leu Ala Val Arg Asn Ser Val Arg Gly Arg Pro Leu Leu Trp Asn
35      40      45

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Met Ser Ala Ser Ser Pro Cys Asn Trp His Gly Val His Cys Asp Ala
50      55      60

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Gly Arg Val Thr Ala Leu Arg Leu Pro Gly Ser Gly Leu Phe Gly Ser
65      70      75      80

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Leu Pro Ile Gly Gly Ile Gly Asn Leu Thr Gln Leu Lys Thr Leu Ser  
 85 90 95  
 Leu Arg Phe Asn Ser Leu Ser Gly Pro Ile Pro Ser Asp Phe Ser Asn  
 100 105 110  
 Leu Val Leu Leu Arg Tyr Leu Tyr Leu Gln Gly Asn Ala Phe Ser Gly  
 115 120 125  
 Glu Ile Pro Ser Leu Leu Phe Thr Leu Pro Ser Ile Ile Arg Ile Asn  
 130 135 140  
 Leu Gly Glu Asn Lys Phe Ser Gly Arg Ile Pro Asp Asn Val Asn Ser  
 145 150 155 160  
 Ala Thr Arg Leu Val Thr Leu Tyr Leu Glu Arg Asn Gln Leu Ser Gly  
 165 170 175  
 Pro Ile Pro Glu Ile Thr Leu Pro Leu Gln Gln Phe Asn Val Ser Ser  
 180 185 190  
 Asn Gln Leu Asn Gly Ser Ile Pro Ser Ser Leu Ser Ser Trp Pro Arg  
 195 200 205  
 Thr Ala Phe Glu Gly Asn Thr Leu Cys Gly Lys Pro Leu Asp Thr Cys  
 210 215 220  
 Glu Ala Glu Ser Pro Asn Gly Gly Asp Ala Gly Gly Pro Asn Thr Pro  
 225 230 235 240  
 Pro Glu Lys Lys Asp Ser Asp Lys Leu Ser Ala Gly Ala Ile Val Gly  
 245 250 255  
 Ile Val Ile Gly Cys Val Val Gly Leu Leu Leu Leu Ile Leu  
 260 265 270  
 Phe Cys Leu Cys Arg Lys Arg Lys Lys Glu Glu Asn Val Pro Ser Arg  
 275 280 285  
 Asn Val Glu Ala Pro Val Ala Ala Ala Thr Ser Ser Ala Ala Ile Pro  
 290 295 300  
 Lys Glu Thr Val Val Val Val Pro Pro Ala Lys Ala Thr Gly Ser Glu  
 305 310 315 320  
 Ser Gly Ala Val Asn Lys Asp Leu Thr Phe Phe Val Lys Ser Phe Gly  
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Glu Phe Asp Leu Asp Gly Leu Leu Lys Ala Ser Ala Glu Val Leu Gly  
 340 345 350  
 Lys Gly Thr Val Gly Ser Ser Tyr Lys Ala Ser Phe Glu His Gly Leu  
 355 360 365  
 Val Val Ala Val Lys Arg Leu Arg Asp Val Val Val Pro Glu Lys Glu  
 370 375 380  
 Phe Arg Glu Arg Leu His Val Leu Gly Ser Met Ser His Ala Asn Leu  
 385 390 395 400  
 Val Thr Leu Ile Ala Tyr Tyr Phe Ser Arg Asp Glu Lys Leu Val  
 405 410 415  
 Phe Glu Tyr Met Ser Lys Gly Ser Leu Ser Ala Ile Leu His Gly Asn  
 420 425 430  
 Lys Gly Asn Gly Arg Thr Pro Leu Asn Trp Glu Thr Arg Ala Gly Ile  
 435 440 445  
 Ala Leu Gly Ala Ala Arg Ala Ile Ser Tyr Leu His Ser Arg Asp Gly  
 450 455 460  
 Thr Thr Ser His Gly Asn Ile Lys Ser Ser Asn Ile Leu Leu Ser Asp  
 465 470 475 480  
 Ser Tyr Glu Ala Lys Val Ser Asp Tyr Gly Leu Ala Pro Ile Ile Ser  
 485 490 495  
 Ser Thr Ser Ala Pro Asn Arg Ile Asp Gly Tyr Arg Ala Pro Glu Ile  
 500 505 510  
 Thr Asp Ala Arg Lys Ile Ser Gln Lys Ala Asp Val Tyr Ser Phe Gly  
 515 520 525  
 Val Leu Ile Leu Glu Leu Leu Thr Gly Lys Ser Pro Thr His Gln Gln  
 530 535 540  
 Leu Asn Glu Glu Gly Val Asp Leu Pro Arg Trp Val Gln Ser Val Thr  
 545 550 555 560  
 Glu Gln Gln Thr Pro Ser Asp Val Leu Asp Pro Glu Leu Thr Arg Tyr  
 565 570 575

Gln Pro Glu Gly Asn Glu Asn Ile Ile Arg Leu Leu Lys Ile Gly Met  
 580 585 590

Ser Cys Thr Ala Gln Phe Pro Asp Ser Arg Pro Ser Met Ala Glu Val  
 595 600 605

Thr Arg Leu Ile Glu Glu Val Ser His Ser Ser Gly Ser Pro Asn Pro  
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Val Ser Asp  
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<211> 1137

<212> DNA

<213> Arabidopsis thaliana

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 aacaatgttg ttgagaacag tttcattggt atcatgttgt ccaagaccaa ggcttctcca 240  
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 gctgcagctc cagctactgc tgcttcggtt cagacagatg tgtatggta agcagcatca 420  
 aaccttgttg ctggaactac tttagagtcc actgttcagc aaattcttga tatgggtgga 480  
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 caagccccag ctactgggga acaggcagcc aatcctctag cacagcccca acaagcagca 660  
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 gaagggatgg ggtttgatgc tgcgatggtc ttggaagtgt tctttgcgtg taacaagaat 1080

gaagaacttg cagctaatta ccttctagat cacatgcatg agtttgaaga tcaataa 1137

<210> 744

<211> 378

<212> PRT

<213> Arabidopsis thaliana

<400> 744

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20 25 30

Val Lys Gly Ala Glu Tyr Pro Ala Ala Lys Gln Met Leu Ile His Gln  
35 40 45

Gly Lys Val Leu Lys Asp Glu Thr Thr Leu Glu Glu Asn Asn Val Val  
50 55 60

Glu Asn Ser Phe Ile Val Ile Met Leu Ser Lys Thr Lys Ala Ser Pro  
65 70 75 80

Ser Gly Ala Ser Thr Ala Ser Ala Pro Ala Pro Ser Ala Thr Gln Pro  
85 90 95

Gln Thr Val Ala Thr Pro Gln Val Ser Ala Pro Thr Ala Ser Val Pro  
100 105 110

Val Pro Thr Ser Gly Thr Ala Thr Ala Ala Ala Pro Ala Thr Ala Ala  
115 120 125

Ser Val Gln Thr Asp Val Tyr Gly Gln Ala Ala Ser Asn Leu Val Ala  
130 135 140

Gly Thr Thr Leu Glu Ser Thr Val Gln Gln Ile Leu Asp Met Gly Gly  
145 150 155 160

Gly Ser Trp Asp Arg Asp Thr Val Val Arg Ala Leu Arg Ala Ala Phe  
165 170 175

Asn Asn Pro Glu Arg Ala Val Glu Tyr Leu Tyr Ser Gly Ile Pro Ala  
180 185 190

Gln Ala Glu Ile Pro Pro Val Ala Gln Ala Pro Ala Thr Gly Glu Gln  
 195 200 205

Ala Ala Asn Pro Leu Ala Gln Pro Gln Gln Ala Ala Pro Ala Ala  
 210 215 220

Ala Thr Gly Gly Pro Asn Ala Asn Pro Leu Asn Leu Phe Pro Gln Gly  
 225 230 235 240

Met Pro Ala Ala Asp Ala Gly Ala Gly Ala Gly Asn Leu Asp Phe Leu  
 245 250 255

Arg Asn Ser Gln Gln Phe Gln Ala Leu Arg Ala Met Val Gln Ala Asn  
 260 265 270

Pro Gln Ile Leu Gln Pro Met Leu Gln Glu Leu Gly Lys Gln Asn Pro  
 275 280 285

Gln Leu Val Arg Leu Ile Gln Glu His Gln Ala Asp Phe Leu Arg Leu  
 290 295 300

Ile Asn Glu Pro Val Glu Gly Glu Glu Asn Val Met Glu Gln Leu Glu  
 305 310 315 320

Ala Ala Met Pro Gln Ala Val Thr Val Thr Pro Glu Glu Arg Glu Ala  
 325 330 335

Ile Glu Arg Leu Glu Gly Met Gly Phe Asp Arg Ala Met Val Leu Glu  
 340 345 350

Val Phe Phe Ala Cys Asn Lys Asn Glu Glu Leu Ala Ala Asn Tyr Leu  
 355 360 365

Leu Asp His Met His Glu Phe Glu Asp Gln  
 370 375

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<211> 651

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 746

&lt;211&gt; 216

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 746

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50      55      60

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Lys Leu Gln Ile Trp Asp Thr Ala Gly Gln Glu Arg Phe Arg Thr Ile
65      70      75      80

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Thr Thr Ala Tyr Tyr Arg Gly Ala Met Gly Ile Leu Leu Val Tyr Asp
85      90      95

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<211> 2664

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&lt;211&gt; 887

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 748

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 35 40 45

Asp Gly Thr Ile Thr Ala Ser Ala Asn Lys Ile Thr Asp Thr Val Asp  
 50 55 60

Glu Lys Gly Asp Lys Asp Glu Asp Tyr Lys Glu Asn Leu His Gly Val  
 65 70 75 80

Lys Leu Glu Glu Thr Leu Tyr Pro Asp Val Pro Glu Arg Leu Glu Glu  
 85 90 95

Leu Lys Glu Val Lys Gly Asn Asp Gly Asp Ala Asn Lys Ala Glu Val  
 100 105 110

Glu Gly Pro Glu Cys Val Glu Glu Asn Ala Leu Ala Asn Arg Thr Pro  
 115 120 125

Ala Glu Tyr Ile Ser Ser Val Ser Asp Ser Ser Val His Lys Cys Lys  
 130 135 140

Asp Lys Gly Lys Asn Ser Asp Val Pro Leu Thr His Leu Val Gly Asn  
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Ala Leu Phe Ser Glu Ser Lys Thr Glu Asp Leu His Asp Lys Asp Lys  
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 260 265 270  
 Phe Ser Gly Ser Arg Ser Phe Asn His Asn Pro Ser Cys Ser Leu Ser  
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 Gln Gly Ile Asp Trp Gln Ala Leu Ser His Asn Asp Ser Lys Tyr Asn  
 305 310 315 320  
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 325 330 335  
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 Pro Arg Thr Gly Ser Leu Glu Asn Gly Ser Lys Phe Thr Val Glu Lys  
 385 390 395 400  
 Lys Thr Ala Lys Asp Phe Tyr Ser Gly Ser Asn Ser Trp Ile Thr Gly  
 405 410 415  
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 565 570 575  
 Ser Trp Val Gly Cys Asp Val Cys Leu His Trp Cys His Thr Asp Cys  
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 Pro Gly Met Thr Glu Met Gln Phe His Cys Val Ala Cys Asn His Pro  
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 Ser Glu Met Phe Gly Phe Val Lys Glu Val Phe Leu Asn Phe Ala Arg  
 625 630 635 640  
 Glu Trp Lys Phe Glu Arg Phe Cys Lys Glu Leu Glu Tyr Val Asn Lys  
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 660 665 670  
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 675 680 685  
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 Page 1189

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725 730 735

Val Cys Ser Asp Asn Pro His Asn Gln Leu Lys Arg Ser Ala Ser Val  
740 745 750

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755 760 765

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770 775 780

Glu Ser Ile Val Arg Met Lys Gln Ala Glu Ala Glu Met Phe Gln Gly  
785 790 795 800

Arg Ala Asp Asp Ala Arg Arg Glu Ala Glu Gly Leu Lys Arg Ile Ala  
805 810 815

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820 825 830

Lys Leu Ser Met Glu Asp Ala Gln Glu Arg Arg Arg Arg Arg Tyr Glu  
835 840 845

Glu Leu Glu Ala Met Gln Arg Gly Gln Arg Glu Phe Tyr Glu Met Lys  
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<211> 295

<212> PRT

<213> Arabidopsis thaliana

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85	90 95

Asp Leu Val Arg Glu Glu Leu Ser Ser	Gly Leu Ser Ser Gln
Page 1191	

Leu Lys Glu Leu Val Asn His Gly Lys Leu Val Pro Asp Glu Phe Ile  
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Ser Gly Tyr Ile Leu Asp Gly Phe Pro Arg Thr Val Thr Gln Ala Glu  
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 165 170 175

Arg Glu Glu Ala Leu Leu Ala Lys Cys Leu Gly Arg Arg Ile Cys Ser  
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Glu Cys Gly Gly Asn Tyr Asn Val Ala Cys Ile Asp Ile Lys Gly Asp  
 195 200 205

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Cys Glu Ser Lys Leu Ile Ser Arg Ala Asp Asp Thr Glu Glu Val Val  
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<212> DNA

<213> Arabidopsis thaliana

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<211> 489

<212> PRT

<213> Arabidopsis thaliana

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Page 1193

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Ala Pro Asn Val Val Tyr Lys Gly Arg Leu Glu Asp Asp Arg Trp Ile  
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Ala Val Lys Arg Phe Asn Arg Ser Ala Trp Pro Asp Thr Arg Gln Phe  
85 90 95  
Leu Glu Glu Ala Lys Ala Val Gly Gln Leu Arg Asn Glu Arg Leu Ala  
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Val Ile Pro Glu Ser Val Val Tyr Ser Phe Gly Thr Leu Leu Leu Asp  
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Leu Leu Ser Gly Lys His Ile Pro Pro Ser His Ala Leu Asp Leu Ile  
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Arg Gly Lys Asn Phe Leu Met Leu Met Asp Ser Cys Leu Asp Gly His  
260 265 270

Phe Ser Asn Asp Asp Gly Thr Asp Leu Val Arg Leu Ala Ser Arg Cys  
275 280 285

Leu Gln Tyr Glu Ala Arg Glu Arg Pro Asn Val Lys Ser Leu Val Ser  
290 295 300

Ser Leu Ala Pro Leu Gln Lys Glu Thr Asp Ile Pro Ser His Val Leu  
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Met Gly Ile Pro His Gly Ala Ala Ser Pro Lys Glu Thr Thr Ser Leu  
325 330 335

Thr Pro Leu Gly Asp Ala Cys Ser Arg His Asp Leu Thr Ala Ile His  
340 345 350

Glu Ile Leu Glu Lys Val Gly Tyr Lys Asp Asp Glu Gly Val Ala Asn  
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Glu Leu Ser Phe Gln Val Trp Thr Asp Gln Ile Gln Glu Thr Leu Asn  
370 375 380

Ser Lys Lys Gln Gly Asp Ala Ala Phe Lys Gly Lys Asp Phe Val Thr  
385 390 395 400

Ala Val Glu Cys Tyr Thr Gln Phe Ile Glu Asp Gly Thr Met Val Ser  
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Pro Thr Val Phe Ala Arg Arg Cys Leu Cys Tyr Leu Met Ser Asn Met  
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Pro Gln Glu Ala Leu Gly Asp Ala Met Gln Ala Gln Val Val Ser Pro  
435 440 445

Glu Trp Pro Thr Ala Phe Tyr Leu Gln Ala Ala Ala Leu Phe Ser Leu  
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<213> *Arabidopsis thaliana*

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&lt;210&gt; 754

&lt;211&gt; 287

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 754

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Met Gly Arg Glu Val Val Glu Val Leu Met Asp Arg Asn Ala Asp Val
1      5      10
Ser Ser Ala Arg Val His Val Ala Pro Lys Ile Ala Ala Glu Glu Thr
20      25      30
Asp Glu Glu Phe Glu Val Lys Glu Cys Thr Glu Glu Lys Ser Leu Ser
35      40      45

```

## 047-E2F-PCT.ST25.txt

Glu Asn Ala Pro Asn Val Gly Ser Ala Glu Arg Val Gly Ala Gln Lys  
 50 55 60  
 Ser Pro Lys Thr Arg Asn Gly Asn Ala Lys Val Ser Lys Gln Gln Asp  
 65 70 75 80  
 Ala Pro Leu Leu Ala Val Arg Lys Pro Leu Gln Pro Glu Asn Lys Lys  
 85 90 95  
 His Ile Asp Asp Glu Asp Asn Cys Ser Ile Ala Ser Ser Val Ala Thr  
 100 105 110  
 Ser Met Arg Met Gly Lys Ser Gly Leu Thr Tyr Gly Ser Ala Pro Thr  
 115 120 125  
 Phe Arg Ser Ala Gln Arg Ala Glu Lys Arg Lys Glu Tyr Tyr Gln Lys  
 130 135 140  
 Leu Glu Glu Lys Asn Gln Ala Leu Glu Ala Glu Arg Asn Glu Leu Glu  
 145 150 155 160  
 Gln Arg Gln Lys Asp Glu Gln Glu Ala Ala Leu Lys Gln Leu Arg Lys  
 165 170 175  
 Asn Leu Lys Phe Lys Ala Lys Pro Val Pro Asn Phe Tyr Tyr Glu Ala  
 180 185 190  
 Pro Pro Ala Lys Pro Glu Leu Lys Lys Leu Pro Leu Thr Arg Pro Lys  
 195 200 205  
 Ser Pro Lys Leu Ile Leu Ser Arg Arg Lys Ser Phe Ser Asp Ala Val  
 210 215 220  
 Ser Ser Ser Ser Arg Glu Glu Ile Leu Lys Thr Val Ser Asn Arg Asn  
 225 230 235 240  
 Arg His Ser Thr Gly Thr Val Gln Asn Lys Asp Asp Asp His Arg Asn  
 245 250 255  
 Lys Asn Thr Asn Ala Ala His Asp Ser Pro Arg Val Arg Ser Gly Lys  
 260 265 270  
 Gly Lys Ser Gly Leu Lys Pro Val Asn Glu Ser Ser Glu Glu Ala  
 275 280 285

&lt;210&gt; 755

&lt;211&gt; 780

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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<400> 755
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gaaaaacaga agaagcagaa gaaccaaagt gaaacatctg agaaggaaac taaaaaattc    180
agcaccgttt acgaaaagtt taatgatact attaaagaac tagacagggt ttctggaaca    240
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cacaatgagt gcaatttcga tgataaagct catctgggag tatctgacag cgcccttttt    360
gtacaaggat ttgatacttc ccatccaagg catgaaatca agacagcatt gtggaatcat    420
ttctcttcat gtggaaggt ctatctgatt tatgttccca ttgcgtgttc taccggtgct    480
tcgggtgggat atgctttcat tgatatgaaa aatgaaacca aggggttgac actcaatgga    540
agtcatttgg gaggacggaa gatcgatgtt atgttcgcca tagatagaga agagttttac    600
ttctcttcta acttaaaaca ctgtcaacgc tgccgtaatt ataggccatg gcttgtttta    660
aaagccatgt cagatgcctg ctttgaatat caccagagga ttaaaccgcg gatcgttggc    720
actccccata gcaagattgg tcgttttaca gccattattg gtcgtcgtc ttacagctag    780

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&lt;210&gt; 756

&lt;211&gt; 259

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 756

```

Met Asp Arg Arg  Leu Lys Lys Cys Ser  Thr Ser  Thr Asp Val  Glu Ser
 1          5          10          15

Val His Asp Val  Ser Lys Val  Thr  Asp Pro Leu  Gln Lys  Ala Lys Arg
      20          25          30

Glu Leu Asp Asn Val  Glu Ile Lys  Glu Lys Gln Lys  Lys Gln Lys Asn
      35          40          45

Gln Asn Glu Thr Ser Glu  Lys Glu Thr Lys Lys  Phe Ser Thr Val Tyr
      50          55          60

```

Glu Lys Phe Asn Asp Thr Ile Lys Glu Leu Asp Arg Val Ser Gly Thr  
65 70 75 80

Cys Pro Ile Arg Pro Ala Ile Pro Phe Thr Pro Pro Lys Glu Lys Val  
85 90 95

Glu Pro Ile Tyr His Asn Glu Cys Asn Phe Asp Asp Lys Ala His Leu  
100 105 110

Gly Val Ser Asp Ser Ala Leu Phe Val Gln Gly Phe Asp Thr Ser His  
115 120 125

Pro Arg His Glu Ile Lys Thr Ala Leu Trp Asn His Phe Ser Ser Cys  
130 135 140

Gly Lys Val Tyr Leu Ile Tyr Val Pro Ile Ala Cys Ser Thr Gly Ala  
145 150 155 160

Ser Val Gly Tyr Ala Phe Ile Asp Met Lys Asn Glu Thr Lys Gly Leu  
165 170 175

Thr Leu Asn Gly Ser His Leu Gly Gly Arg Lys Ile Asp Val Met Phe  
180 185 190

Ala Ile Asp Arg Glu Glu Phe Tyr Phe Ser Ser Asn Leu Lys His Cys  
195 200 205

Gln Arg Cys Arg Asn Tyr Arg Pro Trp Leu Val Leu Lys Ala Met Ser  
210 215 220

Asp Ala Cys Phe Glu Tyr His Gln Arg Ile Lys Pro Arg Ile Val Gly  
225 230 235 240

Thr Pro His Ser Lys Ile Gly Arg Phe Thr Ala Ile Ile Gly Arg Arg  
245 250 255

Ser Tyr Ser

<210> 757

<211> 2433

<212> DNA

<213> Arabidopsis thaliana

<400> 757

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attggtgttg	gtaaaaggaa	aacacagttg	tatgcgacga	ttgatctgca	aaaagctaga	180
gttggggaga	ccaggaagat	caaaaatgaa	cctaagaacc	caaagtggta	tgatgcgttt	240
catatttact	gtgctcactt	ggcttctgat	atcatcttca	ctgttaaaga	tgataatccc	300
attggagcta	cccttatcgg	aagagcttac	attcctgttg	atcaagtcac	taacggcgag	360
gaagtggatc	agtgggttga	gatcttggat	aatgacagaa	accctattca	gggaggatca	420
aagattcatg	tcaagcttca	atatttccat	gttgaggagg	atcgtaactg	gaacatgggt	480
atcaaaagtg	ccaagtcccc	tggagtgccca	tacacattct	tctcgacagag	acaaggctgc	540
aaagtttctc	tgtaccaaga	tgctcatatt	ccagacaact	ttgtccctag	aattcctctc	600
gctggaggga	agaactatga	gcctcaaaga	tgttgggagg	atatttttga	tgctattagc	660
aatgcaaaac	acttgatcta	cattactggg	tggtctgttt	acgctgagat	tgcttttagtg	720
agggactcga	ggaggccata	gcctggagg	gatgtgacca	ttggtgagct	actcaagaag	780
aaggctagt	aaggtgtcag	ggttcttttg	ctgttttggg	atgacagaac	ttctgttgat	840
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ggaagtgatg	tccattgtat	tctgtgccct	cgtaaccctg	atgacggtgg	tagcatagtc	960
caaagtttgc	agatctctac	tatgttcacg	catcatcaga	aaatcgttgt	tgtggacagc	1020
gagatgccaa	gcagaggagg	atcagaaatg	aggagaattg	tgagttttgt	tggcgggtatt	1080
gatctttgtg	atggaagata	cgacactccg	ttccactcct	tgttcaggac	attggacaca	1140
gtccaccatg	atgacttcca	tcaacctaac	ttcactgggt	ctgctatcac	taaagggtgt	1200
ccaagggagc	cttggcatga	cattcactcc	cgtcttgaag	gtccaattgc	ttgggatgtc	1260
atgtacaact	tcgagcagag	atggagcaag	caggggtgga	aagacattct	ggttaagttg	1320
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aaccagtact	tccttgggag	ttcttttgct	tgggcagccg	atgggtattac	tcctgaggac	1620
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aaaggagaga	agttcagggg	ctatgttgtg	gttccaatgt	ggccagaagg	tctcccagag	1740
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gatgtgattc	aggctctcag	ggcccagggg	cttgagggaag	atccaagaaa	ctatctgaca	1860
ttcttctgtc	ttggaaaccg	tgaggtcaag	aaagatggag	agtatgagcc	tgctgagaaa	1920

## 047-E2F-PCT.ST25.txt

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ccagaccccg acactgatta catgaggcg caagaagcac gccgtttcat gatttacgtc 1980
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cagagggtcaa tggacgggtgc aagagactct gagatagcaa tgggagggtta tcaaccacat 2100
cacttgctcc atagacaacc agctcgtggc cagatccatg gggttcgtat gtcactctgg 2160
tacgaacacc tgggaatgct cgatgaaacc ttctcgcgc catcaagctt ggaatgcatt 2220
gagaaagtta accgcatttc tgacaagtat tgggactttt actcaagtga gtcactcgaa 2280
catgaccttc ctggctcactt gctccgctac ccgatcggtg tagccagcga aggcgacatc 2340
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tcagactacc tgcttccaat cttacaacc taa 2433

```

&lt;210&gt; 758

&lt;211&gt; 810

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 758

```

Met Ala Gln His Leu Leu His Gly Thr Leu His Ala Thr Ile Tyr Glu
1      5      10

```

```

Val Asp Ala Leu His Gly Gly Gly Val Arg Gln Gly Phe Leu Gly Lys
20     25     30

```

```

Ile Leu Ala Asn Val Glu Glu Thr Ile Gly Val Gly Lys Gly Glu Thr
35     40     45

```

```

Gln Leu Tyr Ala Thr Ile Asp Leu Gln Lys Ala Arg Val Gly Arg Thr
50     55     60

```

```

Arg Lys Ile Lys Asn Glu Pro Lys Asn Pro Lys Trp Tyr Glu Ser Phe
65     70     75     80

```

```

His Ile Tyr Cys Ala His Leu Ala Ser Asp Ile Ile Phe Thr Val Lys
85     90     95

```

```

Asp Asp Asn Pro Ile Gly Ala Thr Leu Ile Gly Arg Ala Tyr Ile Pro
100    105    110

```

```

Val Asp Gln Val Ile Asn Gly Glu Glu Val Asp Gln Trp Val Glu Ile
115    120    125

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047-E2F-PCT.ST25.txt

Leu Asp Asn Asp Arg Asn Pro Ile Gln Gly Gly Ser Lys Ile His Val  
 130 135 140  
 Lys Leu Gln Tyr Phe His Val Glu Glu Asp Arg Asn Trp Asn Met Gly  
 145 150 155 160  
 Ile Lys Ser Ala Lys Phe Pro Gly Val Pro Tyr Thr Phe Phe Ser Gln  
 165 170 175  
 Arg Gln Gly Cys Lys Val Ser Leu Tyr Gln Asp Ala His Ile Pro Asp  
 180 185 190  
 Asn Phe Val Pro Arg Ile Pro Leu Ala Gly Gly Lys Asn Tyr Glu Pro  
 195 200 205  
 Gln Arg Cys Trp Glu Asp Ile Phe Asp Ala Ile Ser Asn Ala Lys His  
 210 215 220  
 Leu Ile Tyr Ile Thr Gly Trp Ser Val Tyr Ala Glu Ile Ala Leu Val  
 225 230 235 240  
 Arg Asp Ser Arg Arg Pro Lys Pro Gly Gly Asp Val Thr Ile Gly Glu  
 245 250 255  
 Leu Leu Lys Lys Lys Ala Ser Glu Gly Val Arg Val Leu Leu Leu Val  
 260 265 270  
 Trp Asp Asp Arg Thr Ser Val Asp Val Leu Lys Lys Asp Gly Leu Met  
 275 280 285  
 Ala Thr His Asp Glu Glu Thr Glu Asn Phe Phe Arg Gly Ser Asp Val  
 290 295 300  
 His Cys Ile Leu Cys Pro Arg Asn Pro Asp Asp Gly Gly Ser Ile Val  
 305 310 315 320  
 Gln Ser Leu Gln Ile Ser Thr Met Phe Thr His His Gln Lys Ile Val  
 325 330 335  
 Val Val Asp Ser Glu Met Pro Ser Arg Gly Gly Ser Glu Met Arg Arg  
 340 345 350  
 Ile Val Ser Phe Val Gly Gly Ile Asp Leu Cys Asp Gly Arg Tyr Asp  
 355 360 365  
 Thr Pro Phe His Ser Leu Phe Arg Thr Leu Asp Thr Val His His Asp  
 370 375 380



047-E2F-PCT.ST25.txt

Asp Phe His Gln Pro Asn Phe Thr Gly Ala Ala Ile Thr Lys Gly Gly  
 385 390 395 400  
 Pro Arg Glu Pro Trp His Asp Ile His Ser Arg Leu Glu Gly Pro Ile  
 405 410 415  
 Ala Trp Asp Val Met Tyr Asn Phe Glu Gln Arg Trp Ser Lys Gln Gly  
 420 425 430  
 Gly Lys Asp Ile Leu Val Lys Leu Arg Asp Leu Ser Asp Ile Ile Ile  
 435 440 445  
 Thr Pro Ser Pro Val Met Phe Gln Glu Asp His Asp Val Trp Asn Val  
 450 455 460  
 Gln Leu Phe Arg Ser Ile Asp Gly Gly Ala Ala Ala Gly Phe Pro Glu  
 465 470 475 480  
 Ser Pro Glu Ala Ala Ala Glu Ala Gly Leu Val Ser Gly Lys Asp Asn  
 485 490 495  
 Ile Ile Asp Arg Ser Ile Gln Asp Ala Tyr Ile His Ala Ile Arg Arg  
 500 505 510  
 Ala Lys Asp Phe Ile Tyr Val Glu Asn Gln Tyr Phe Leu Gly Ser Ser  
 515 520 525  
 Phe Ala Trp Ala Ala Asp Gly Ile Thr Pro Glu Asp Ile Asn Ala Leu  
 530 535 540  
 His Leu Ile Pro Lys Glu Leu Ser Leu Lys Ile Val Ser Lys Ile Glu  
 545 550 555 560  
 Lys Gly Glu Lys Phe Arg Val Tyr Val Val Val Pro Met Trp Pro Glu  
 565 570 575  
 Gly Leu Pro Glu Ser Gly Ser Val Gln Ala Ile Leu Asp Trp Gln Arg  
 580 585 590  
 Arg Thr Met Glu Met Met Tyr Lys Asp Val Ile Gln Ala Leu Arg Ala  
 595 600 605  
 Gln Gly Leu Glu Glu Asp Pro Arg Asn Tyr Leu Thr Phe Phe Cys Leu  
 610 615 620  
 Gly Asn Arg Glu Val Lys Lys Asp Gly Glu Tyr Glu Pro Ala Glu Lys

625 630 635 640

Pro Asp Pro Asp Thr Asp Tyr Met Arg Ala Gln Glu Ala Arg Arg Phe  
645 650 655Met Ile Tyr Val His Thr Lys Met Met Ile Val Asp Asp Glu Tyr Ile  
660 665 670Ile Ile Gly Ser Ala Asn Ile Asn Gln Arg Ser Met Asp Gly Ala Arg  
675 680 685Asp Ser Glu Ile Ala Met Gly Gly Tyr Gln Pro His Leu Ser His  
690 695 700Arg Gln Pro Ala Arg Gly Gln Ile His Gly Phe Arg Met Ser Leu Trp  
705 710 715 720Tyr Glu His Leu Gly Met Leu Asp Glu Thr Phe Leu Asp Pro Ser Ser  
725 730 735Leu Glu Cys Ile Glu Lys Val Asn Arg Ile Ser Asp Lys Tyr Trp Asp  
740 745 750Phe Tyr Ser Ser Glu Ser Leu Glu His Asp Leu Pro Gly His Leu Leu  
755 760 765Arg Tyr Pro Ile Gly Val Ala Ser Glu Gly Asp Ile Thr Glu Leu Pro  
770 775 780Gly Phe Glu Phe Phe Pro Asp Thr Lys Ala Arg Ile Leu Gly Thr Lys  
785 790 795 800Ser Asp Tyr Leu Pro Pro Ile Leu Thr Thr  
805 810

&lt;210&gt; 759

&lt;211&gt; 1599

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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 cgtgaggaga gtttgatgaa gaagagacgt gaaggtatgc aagctcttca gggtttcctt 180  
 Page 1204

047-E2F-PCT.ST25.txt

tcagcttccg	ccgcctccgt	cgataagaag	ttggatagtc	tgaaggatat	ggctcgtggg	240
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tctattgaga	gaagtcctcc	aatcgaggaa	gtgataagtg	ctggtgttgt	tcctaggttt	360
gttgagtttc	ttaagaaaga	agattacccc	gccattcagt	ttgaggcagc	ttgggctcta	420
acaacattg	catctggaac	atcggatcac	actaagggtg	taatcgatca	caatgctggt	480
ccaatctttg	ttcagcttct	tgcttcccct	agcgatgatg	ttcgtgaaca	ggctgtatgg	540
gctttgggta	acgttgctgg	tgattcacca	cggtgccgtg	atcttgttct	tggatgtggg	600
gcactgcttc	cgctgctcaa	tcagcttaat	gagcatgcta	aattgtccat	gcttcgaaat	660
gccacttgga	ccttgctcaa	cttctgtcgt	ggcaagcctc	agcctcactt	tgaccagggtc	720
aaacctgctc	ttcccgccct	tgaacgacta	attcattcag	atgatgaaga	agtcttgaca	780
gatgcctggt	gggctctttc	ttacctctct	gatgggacca	atgacaaaat	ccagactgtc	840
atccaggccg	gtgttgctcc	aaaacttggt	gaacttctcc	tccatcattc	tccatctgtg	900
ctaattcctg	ctcttcgcac	tggtggaaat	atagttactg	gagatgatat	acaaacacag	960
tgctgatcat	atagtgggtc	tctaccttgt	cttgccaacc	tgctcactca	aaaccataag	1020
aaaagcataa	agaaggaagc	ttgctggacg	atttcaaaca	tcacagcagg	caacaaagat	1080
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gctgaatttg	acattaagaa	ggaagctgca	tgggcaattt	caaatgcaac	ttcagggtgt	1200
tctcatgata	aaataaaata	cctgggtggag	caaggggtgca	taaaaccatt	atgcatcttc	1260
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gagacacagc	aacctccagg	tggtgatggt	tctcaggctg	ggttccagtt	tggagggaat	1560
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<210> 760

<211> 532

<212> PRT

<213> Arabidopsis thaliana

<400> 760

Met Ser Leu Arg Pro Asn Ala Lys Thr Glu Val Arg Arg Asn Arg Tyr  
Page 1205

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Lys Val Ala Val Asp Ala Glu Glu Gly Arg Arg Arg Arg Glu Asp Asn  
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Met Val Glu Ile Arg Lys Ser Lys Arg Glu Glu Ser Leu Met Lys Lys  
35 40 45  
Arg Arg Glu Gly Met Gln Ala Leu Gln Gly Phe Pro Ser Ala Ser Ala  
50 55 60  
Ala Ser Val Asp Lys Lys Leu Asp Ser Leu Lys Asp Met Val Ala Gly  
65 70 75 80  
Val Trp Ser Asp Asp Pro Ala Leu Gln Leu Glu Ser Thr Thr Gln Phe  
85 90 95  
Arg Lys Leu Leu Ser Ile Glu Arg Ser Pro Pro Ile Glu Glu Val Ile  
100 105 110  
Ser Ala Gly Val Val Pro Arg Phe Val Glu Phe Leu Lys Lys Glu Asp  
115 120 125  
Tyr Pro Ala Ile Gln Phe Glu Ala Ala Trp Ala Leu Thr Asn Ile Ala  
130 135 140  
Ser Gly Thr Ser Asp His Thr Lys Val Val Ile Asp His Asn Ala Val  
145 150 155 160  
Pro Ile Phe Val Gln Leu Leu Ala Ser Pro Ser Asp Asp Val Arg Glu  
165 170 175  
Gln Ala Val Trp Ala Leu Gly Asn Val Ala Gly Asp Ser Pro Arg Cys  
180 185 190  
Arg Asp Leu Val Leu Gly Cys Gly Ala Leu Leu Pro Leu Leu Asn Gln  
195 200 205  
Leu Asn Glu His Ala Lys Leu Ser Met Leu Arg Asn Ala Thr Trp Thr  
210 215 220  
Leu Ser Asn Phe Cys Arg Gly Lys Pro Gln Pro His Phe Asp Gln Val  
225 230 235 240  
Lys Pro Ala Leu Pro Ala Leu Glu Arg Leu Ile His Ser Asp Asp Glu  
245 250 255

Glu Val Leu Thr Asp Ala Cys Trp Ala Leu Ser Tyr Leu Ser Asp Gly  
 260 265 270  
 Thr Asn Asp Lys Ile Gln Thr Val Ile Gln Ala Gly Val Val Pro Lys  
 275 280 285  
 Leu Val Glu Leu Leu Leu His His Ser Pro Ser Val Leu Ile Pro Ala  
 290 295 300  
 Leu Arg Thr Val Gly Asn Ile Val Thr Gly Asp Asp Ile Gln Thr Gln  
 305 310 315  
 Cys Val Ile Asn Ser Gly Ala Leu Pro Cys Leu Ala Asn Leu Leu Thr  
 325 330 335  
 Gln Asn His Lys Lys Ser Ile Lys Lys Glu Ala Cys Trp Thr Ile Ser  
 340 345 350  
 Asn Ile Thr Ala Gly Asn Lys Asp Gln Ile Gln Thr Val Val Glu Ala  
 355 360 365  
 Asn Leu Ile Ser Pro Leu Val Ser Leu Leu Gln Asn Ala Glu Phe Asp  
 370 375 380  
 Ile Lys Lys Glu Ala Ala Trp Ala Ile Ser Asn Ala Thr Ser Gly Gly  
 385 390 395 400  
 Ser His Asp Gln Ile Lys Tyr Leu Val Glu Gln Gly Cys Ile Lys Pro  
 405 410 415  
 Leu Cys Asp Leu Leu Val Cys Pro Asp Pro Arg Ile Ile Thr Val Cys  
 420 425 430  
 Leu Glu Gly Leu Glu Asn Ile Leu Lys Val Gly Glu Ala Glu Lys Asn  
 435 440 445  
 Leu Gly His Thr Gly Asp Met Asn Tyr Tyr Ala Gln Leu Ile Asp Asp  
 450 455 460  
 Ala Glu Gly Leu Glu Lys Ile Glu Asn Leu Gln Ser His Asp Asn Asn  
 465 470 475 480  
 Glu Ile Tyr Glu Lys Ala Val Lys Ile Leu Glu Thr Tyr Trp Leu Glu  
 485 490 495  
 Glu Glu Asp Asp Glu Thr Gln Gln Pro Pro Gly Val Asp Gly Ser Gln  
 500 505 510

## 047-E2F-PCT.ST25.txt

Ala Gly Phe Gln Phe Gly Gly Asn Gln Ala Pro Val Pro Ser Gly Gly  
 515 520 525

Phe Asn Phe Ser  
 530

<210> 761

<211> 1128

<212> DNA

<213> Arabidopsis thaliana

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 tgcgaaagcg atccttctac ttgactagt tgcaagcatg agtatcatct tcaatgcatt 180  
 cttgagtggg gtcaagaaga ctacagtcg cctatgtgtt ggcaatcaat tagtctcaaa 240  
 gacccacaa gtcaggagtt gcttgaggct gtggaacagg agaggaattt ccgcttcaat 300  
 ccaactagaa atgccaccat atttcgtcat ccaactcttg gtgattttga attacaacat 360  
 ctccagtggt ggggtggataa tgctgagatt gaagaacgaa tcattcagca ctggctgct 420  
 gctgctgcta tgggacgagc aagacatggg gtaagaaggg aaggccacag aagcaggtcg 480  
 tcaagtcaag gacatcaaca gtccatgggt ttctcttcgc aacctaatgc ttcttctcct 540  
 ccacctcatc ctccatgcc ttcttctcca tctcagagag atgagagtga cacagtgta 600  
 aaccttctct acaatgcttt aggggagggt tctcatcagt caaacacgca gccaccaact 660  
 ttcttctcatc ccgccaggt ttctcctca gcactgtatt caaacagcag gcctcttaat 720  
 caatcttccc caagtgaaca agatagagct ggaccatcag aactccagtc atttccggaa 780  
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 gaggttaaaa gagagggtac tgccggaatc gccactgtgt ccgcatgat ggaacgttta 960  
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 actcctgaaa caacaatga gcacaataga gcagcagcgg gtgatgaaca ttctgtgaat 1080  
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<210> 762

<211> 375

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 762

Met Glu Gly Ala Gly Glu Thr Thr Thr Ser Glu Gly His Leu Thr Ser  
 1 5 10 15

Ala Ala Ala Phe Val Glu Gly Gly Ile Gln Asp Ala Cys Asp Asp Ala  
 20 25 30

Cys Ser Ile Cys Leu Glu Ser Phe Cys Glu Ser Asp Pro Ser Thr Leu  
 35 40 45

Thr Ser Cys Lys His Glu Tyr His Leu Gln Cys Ile Leu Glu Trp Cys  
 50 55 60

Gln Arg Ser Ser Gln Cys Pro Met Cys Trp Gln Ser Ile Ser Leu Lys  
 65 70 75 80

Asp Pro Thr Ser Gln Glu Leu Leu Glu Ala Val Glu Gln Glu Arg Asn  
 85 90 95

Phe Arg Phe Asn Pro Thr Arg Asn Ala Thr Ile Phe Arg His Pro Thr  
 100 105 110

Leu Gly Asp Phe Glu Leu Gln His Leu Pro Val Gly Val Asp Asn Ala  
 115 120 125

Glu Ile Glu Glu Arg Ile Ile Gln His Leu Ala Ala Ala Ala Met  
 130 135 140

Gly Arg Ala Arg His Gly Val Arg Arg Glu Gly His Arg Ser Arg Ser  
 145 150 155 160

Ser Ser Gln Gly His Gln Gln Phe Met Val Phe Ser Ser Gln Pro Asn  
 165 170 175

Ala Ser Ser Pro Pro Pro His Pro Pro Met Pro Ser Ser Pro Gln  
 180 185 190

Arg Asp Glu Ser Asp Thr Val Ser Asn Leu Pro His Asn Ala Leu Gly  
 195 200 205

Glu Gly Ser His Gln Ser Asn Thr Gln Pro Pro Thr Ser Ser His Pro  
 210 215 220

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Arg Gln Val Ser Pro Ser Ala Ser Asp Ser Asn Ser Arg Pro Leu Asn  
225 230 235

Gln Ser Ser Pro Ser Glu Gln Asp Arg Ala Gly Pro Ser Glu Leu Gln  
245 250 255

Ser Phe Ser Glu Ser Leu Lys Ser Arg Leu Asn Ala Val Ser Thr Arg  
260 265 270

Tyr Lys Glu Ser Ile Ser Lys Asn Thr Arg Asn Trp Lys Asp Arg Leu  
275 280 285

Phe Ser Arg Asn Thr Ser Met Ala Asp Leu Gly Ser Glu Val Lys Arg  
290 295 300

Glu Val Ser Ala Gly Ile Ala Thr Val Ser Arg Met Met Glu Arg Leu  
305 310 315 320

Glu Thr Arg Glu Asn Ser Arg Pro Ser Thr Ala Ser Val Ser Asp Val  
325 330 335

Ser Glu Asn His Thr Pro Glu Thr Asn Asn Glu His Asn Arg Ala Ala  
340 345 350

Ala Gly Asp Glu His Ser Val Asn Glu Arg Gly Val Lys Glu Thr Cys  
355 360 365

Ala Thr Gly Ser Gly Ser Ser  
370 375

<210> 763

<211> 939

<212> DNA

<213> Arabidopsis thaliana

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aaagaagtag aggcagagtt agtctcacga gatatcggt gtcacttggt tcaagtctt 180  
gaagctgtaa atacagttct cttcgatctg agaggcttca agaggacatc tattacttta 240  
gaccgggaga attcctacct tcaactgtga cttaactgta gatgcagcac tgcgtttctg 300  
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<210> 764

<211> 312

<212> PRT

<213> Arabidopsis thaliana

<400> 764

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Val Ser Glu Ile Asp Ala Ile Ser Lys Glu Val Glu Ala Glu Leu Val  
35 40 45

Ser Arg Asp Ile Gly Cys His Leu Val Gln Val Leu Glu Ala Val Asn  
50 55 60

Thr Val Leu Phe Asp Leu Arg Gly Phe Lys Arg Thr Ser Ile Thr Leu  
65 70 75 80

Asp Pro Glu Asn Ser Tyr Leu His Ser Val Leu Asn Cys Arg Cys Ser  
85 90 95

Thr Ala Phe Leu Ile Ser Val Ile Tyr Ile Glu Val Cys Lys Arg Leu  
100 105 110

Asn Val Pro Ile Val Gly Ser Pro Val Gly Glu Asp Phe Leu Ile Trp  
115 120 121

115

120

125

Pro Lys Thr Glu Tyr Pro Glu Glu Leu Phe Lys Ala Thr Ser Gly Gln  
 130 135 140

Ser Leu Phe Ser Ile Val Asn Gly Arg Cys Val Asp Asp Pro Gly Ser  
 145 150 155 160

Met Ala Ser Asp Leu Thr Ala Lys Ser Leu Gln Asp Leu Asp Met Ala  
 165 170 175

Thr Asn Arg Asp Ile Ile Gly Ile Ala Leu Ala Asn Leu Ile Arg Leu  
 180 185 190

His Trp Arg Arg Ala Ser Lys Ser Ser His Gly Leu Met Leu Thr Ser  
 195 200 205

Pro Leu Ser Gln Leu Asn Asn Ile Ser Ser Ser Asn Phe Pro Leu Leu  
 210 215 220

Arg Pro Gln Asp Leu Arg Leu Ala Ile Ala Ala Ala Glu Arg Leu Leu  
 225 230 235 240

Ile Leu Gln Pro His Asn Trp Ala Leu Arg Arg Asp Leu Gly Met Met  
 245 250 255

Leu Tyr Tyr Asp Arg Gln Tyr Gly Glu Ala Val Gln Glu Leu Ser Ile  
 260 265 270

Cys Met Ala Phe Ala Pro Pro Glu Glu Glu Ala Val Leu Glu Pro Phe  
 275 280 285

Val Glu Arg Leu His Leu Leu Arg Leu Ile Ser Ser Leu Lys Pro Leu  
 290 295 300

Gly Ser Asp Arg Leu Thr Val Pro  
 305 310

<210> 765

<211> 1134

<212> DNA

<213> Arabidopsis thaliana

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ccttgctctc  cacttgtgga  tgttgagaga  tgggatactg  gtgaattggg  ggaagttctt  240
gataattttt  cctggaaaag  tgccacagtt  cgagaggagt  tatctggaca  ttactatgtg  300
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<210> 766

<211> 377

<212> PRT

<213> Arabidopsis thaliana

<400> 766

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Ala Pro Tyr Gly Ala Trp Arg Cys Ala Glu Ile Val Ser Gly Asn Gly  
20 25 30

His Thr Tyr Asn Val Arg Phe Tyr Ser Phe Gln Ile Glu His Glu Glu  
35 40 45

Ala Val Met Glu Lys Val Pro Arg Lys Ile Ile Arg Pro Cys Pro Pro  
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50

55

60

Leu Val Asp Val Glu Arg Trp Asp Thr Gly Glu Leu Val Glu Val Leu  
 65 70 75 80  
 Asp Asn Phe Ser Trp Lys Ala Ala Thr Val Arg Glu Glu Leu Ser Gly  
 85 90 95  
 His Tyr Tyr Val Val Arg Leu Leu Gly Thr Pro Glu Glu Leu Thr Phe  
 100 105 110  
 His Lys Val Asn Leu Arg Ala Arg Lys Ser Trp Gln Asp Glu Arg Trp  
 115 120 125  
 Val Ala Ile Gly Lys Ile Ser Gly Ser Leu Lys Ser Ser Thr Leu Thr  
 130 135 140  
 Gly Ser Asp Val His Gln Lys Leu Gln Pro His Arg Asn Ser Met Pro  
 145 150 155 160  
 Leu His Glu Pro Ser Val Val Ser Ala Arg Leu Leu Lys Arg Pro Ser  
 165 170 175  
 Pro Tyr Asn Trp Ser Glu Cys Ala Glu Ser Cys Thr Gly Asn Pro Lys  
 180 185 190  
 Lys Met Arg Ser Leu Glu Lys Glu Gly Gln Gln Gln Lys Val Asp Ala  
 195 200 205  
 Ile Ser Cys Arg Pro Glu Asn Arg Gly Gly Lys Ser His Val Gln Ala  
 210 215 220  
 Ser Leu Asn Asn His Lys Thr Gly Tyr Cys Gln Ile Val Arg Val Arg  
 225 230 235 240  
 Ser Lys Gly Phe Ser Glu Ser Val Arg Ala Asp Asp Cys Ser Asp Ser  
 245 250 255  
 Asp Val Cys Ser Val Gly Ser Cys Ser Ala Thr Ser Tyr Asp Glu Ser  
 260 265 270  
 Asn Met Pro Pro Cys Met Leu Asp Gly Ser Thr Gln Gln Ala Asp Ser  
 275 280 285  
 Cys Ser Ser Asp Ala Glu Ser Ser Cys Gly Leu Gly Glu Glu Pro Arg  
 290 295 300

Trp Lys His Ser Ser Val Gly Asp Gly Ala Arg Asn Ser Cys Arg Ser  
 305 310 315 320

Glu Leu Tyr Ser Tyr Arg Ser Thr Leu Gly Glu Leu Phe Ser Ser Gly  
 325 330 335

Pro Leu Ser Trp Glu Gln Glu Ala Ser Leu Thr Asp Leu Arg Leu Ser  
 340 345 350

Leu Asn Ile Ser Asp Asp Glu His Leu Met Glu Val Arg Asn Leu Ile  
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Ser Thr Gly Thr Arg Ser Gln Phe Cys  
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<210> 767

<211> 870

<212> DNA

<213> Arabidopsis thaliana

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 acacatggtt ttcatctggt gaaagggaaa gcttttcacg agatggaaga ttatgtggtt 180  
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<210> 768

&lt;211&gt; 289

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 768

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20 25 30Lys Ser Lys Met Leu Lys Gln Ile Thr His Gly Phe His Leu Val Lys  
35 40 45Gly Lys Ala Phe His Glu Met Glu Asp Tyr Val Val Ala Lys Phe Lys  
50 55 60Glu Val Asp Asp Asn Glu Leu Gly Leu Phe Ala Ile Phe Asp Gly His  
65 70 75 80Leu Ser His Glu Ile Pro Asp Tyr Leu Cys Ser His Leu Phe Glu Asn  
85 90 95Ile Leu Lys Glu Pro Asn Phe Trp Gln Glu Pro Glu Lys Ala Ile Lys  
100 105 110Lys Ala Tyr Tyr Ile Thr Asp Thr Thr Ile Leu Asp Lys Ala Asp Asp  
115 120 125Leu Gly Lys Gly Gly Ser Thr Ala Val Thr Ala Ile Leu Ile Asn Cys  
130 135 140Gln Lys Leu Val Val Ala Asn Val Gly Asp Ser Arg Ala Val Ile Cys  
145 150 155 160Gln Asn Gly Val Ala Lys Pro Leu Ser Val Asp His Glu Pro Asn Met  
165 170 175Glu Lys Asp Glu Ile Glu Asn Arg Gly Gly Phe Val Ser Asn Phe Pro  
180 185 190Gly Asp Val Pro Arg Val Asp Gly Gln Leu Ala Val Ala Arg Ala Phe  
195 200 205

Gly Asp Lys Ser Leu Lys Met His Leu Ser Ser Glu Pro Tyr Val Thr  
 210 215 220

Val Glu Ile Ile Asp Asp Asp Ala Glu Phe Leu Ile Leu Ala Ser Asp  
 225 230 235 240

Gly Leu Trp Lys Val Met Ser Asn Gln Glu Ala Val Asp Ser Ile Lys  
 245 250 255

Gly Ile Lys Asp Ala Lys Ala Ala Ala Lys His Leu Ala Glu Glu Ala  
 260 265 270

Val Ala Arg Lys Ser Ser Asp Asp Ile Ser Val Val Val Lys Phe  
 275 280 285

Gln

<210> 769

<211> 831

<212> DNA

<213> Arabidopsis thaliana

<400> 769

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cgtcattgta cttactattt cgattatccg ttctctagtt tctcggtcga tggagtcgtg	720
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gatttaacgg ttactgcatt gatgtatagt ggaccaacca tcaagaatg a	831

&lt;210&gt; 770

&lt;211&gt; 276

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 770

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20 25 30Lys Lys Ile Gln Arg Arg Ser Lys Lys Thr Leu Ile Cys Pro Val Gln  
35 40 45Lys Leu Phe Asp Thr Cys Lys Lys Val Phe Ala Asp Gly Lys Ser Gly  
50 55 60Thr Val Pro Ser Gln Glu Asn Ile Glu Met Leu Arg Ala Val Leu Asp  
65 70 75 80Glu Ile Lys Pro Glu Asp Val Gly Val Asn Pro Lys Met Ser Tyr Phe  
85 90 95Arg Ser Thr Val Thr Gly Arg Ser Pro Leu Val Thr Tyr Leu His Ile  
100 105 110Tyr Ala Cys His Arg Phe Ser Ile Cys Ile Phe Cys Leu Pro Pro Ser  
115 120 125Gly Val Ile Pro Leu His Asn His Pro Glu Met Thr Val Phe Ser Lys  
130 135 140Leu Leu Phe Gly Thr Met His Ile Lys Ser Tyr Asp Trp Val Pro Asp  
145 150 155 160Ser Pro Gln Pro Ser Ser Asp Thr Arg Leu Ala Lys Val Lys Val Asp  
165 170 175Ser Asp Phe Thr Ala Pro Cys Asp Thr Ser Ile Leu Tyr Pro Ala Asp  
180 185 190Gly Gly Asn Met His Cys Phe Thr Ala Lys Thr Ala Cys Ala Val Leu  
195 200 205



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Asp Val Ile Gly Pro Pro Tyr Ser Asp Pro Ala Gly Arg His Cys Thr  
210 215 220

Tyr Tyr Phe Asp Tyr Pro Phe Ser Ser Phe Ser Val Asp Gly Val Val  
225 230 235 240

Val Ala Glu Glu Glu Lys Glu Gly Tyr Ala Trp Leu Lys Glu Arg Glu  
245 250 255

Glu Lys Pro Glu Asp Leu Thr Val Thr Ala Leu Met Tyr Ser Gly Pro  
260 265 270

Thr Ile Lys Glu  
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<210> 771

<211> 615

<212> DNA

<213> Arabidopsis thaliana

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aaccacaaga accgtccatc tcgcagggct acatggaaga aaaacaactc tctcagcctt 600  
cgctcgttacc gttga 615

<210> 772

<211> 204

<212> PRT

<213> Arabidopsis thaliana

&lt;400&gt; 772

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20 25 30Gln Pro Ser Ile Val Arg Leu Val Arg Pro Thr Arg Pro Asp Lys Ala  
35 40 45Arg Arg Leu Gly Tyr Lys Ala Lys Gln Gly Phe Val Tyr Arg Val  
50 55 60Arg Val Arg Arg Gly Gly Arg Lys Arg Pro Val Pro Lys Gly Ile Val  
65 70 75 80Tyr Gly Lys Pro Thr Asn Gln Gly Val Thr Gln Leu Lys Phe Gln Arg  
85 90 95Ser Lys Arg Ser Val Ala Glu Glu Arg Ala Gly Arg Lys Leu Gly Gly  
100 105 110Leu Arg Val Val Asn Ser Tyr Trp Leu Asn Glu Asp Ser Thr Tyr Lys  
115 120 125Tyr Tyr Glu Ile Ile Leu Val Asp Pro Ala His Asn Ala Val Arg Asn  
130 135 140Asp Pro Arg Ile Asn Trp Ile Cys Asn Pro Val His Lys His Arg Glu  
145 150 155 160Leu Arg Gly Leu Thr Ser Glu Gly Lys Lys Asn Arg Gly Leu Arg Gly  
165 170 175Lys Gly His Asn Asn His Lys Asn Arg Pro Ser Arg Arg Ala Thr Trp  
180 185 190Lys Lys Asn Asn Ser Leu Ser Leu Arg Arg Tyr Arg  
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&lt;210&gt; 773

&lt;211&gt; 369

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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 tttaatccgg gaagcaacct cgccactaga gccatcggt ccaacatctt tgataaacc 300  
 acccatccaa attctccctc cgtctacgac tggttgtaca gcggtgactc aaggagtcag 360  
 caccgttag 369

&lt;210&gt; 774

&lt;211&gt; 122

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 774

Met Val Leu Leu Glu Lys Leu Trp Asp Asp Val Val Ala Gly Pro Gln  
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Pro Asp Arg Gly Leu Gly Arg Leu Arg Lys Ile Thr Thr Gln Pro Ile  
 20 25 30

Asn Ile Arg Asp Ile Gly Glu Gly Ser Ser Ser Lys Val Val Met His  
 35 40 45

Arg Ser Leu Thr Met Pro Ala Ala Val Ser Pro Gly Thr Pro Thr Thr  
 50 55 60

Pro Thr Thr Pro Thr Thr Pro Arg Lys Asp Asn Val Trp Arg Ser Val  
 65 70 75 80

Phe Asn Pro Gly Ser Asn Leu Ala Thr Arg Ala Ile Gly Ser Asn Ile  
 85 90 95

Phe Asp Lys Pro Thr His Pro Asn Ser Pro Ser Val Tyr Asp Trp Leu  
 100 105 110

Tyr Ser Gly Asp Ser Arg Ser Gln His Arg  
 115 120

&lt;210&gt; 775

&lt;211&gt; 525

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 775

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aagcgtctat ttgaggaaac tcgtgatgaa gaagaatcta cacctcctac caaaactcaa      180
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&lt;210&gt; 776

&lt;211&gt; 174

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 776

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Cys Leu Gly Leu Pro Gly Arg Thr Glu Lys Ile Lys Glu Glu Gln Glu
20          25          30

Val Ser Cys Val Lys Ser Asn Asn Lys Arg Leu Phe Glu Glu Thr Arg
35          40          45

Asp Glu Glu Glu Ser Thr Pro Pro Thr Lys Thr Gln Ile Val Gly Trp
50          55          60

Pro Pro Val Arg Ser Ser Arg Lys Asn Asn Asn Ser Val Ser Tyr Val
65          70          75          80

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Lys Val Ser Met Asp Gly Ala Pro Tyr Leu Arg Lys Ile Asp Leu Lys  
 85 90 95

Thr Tyr Lys Asn Tyr Pro Glu Leu Leu Lys Ala Leu Glu Asn Met Phe  
 100 105 110

Lys Val Met Ile Gly Glu Tyr Cys Glu Arg Glu Gly Tyr Lys Gly Ser  
 115 120 125

Gly Phe Val Pro Thr Tyr Glu Asp Lys Asp Gly Asp Trp Met Leu Val  
 130 135 140

Gly Asp Val Pro Trp Asp Met Phe Ser Ser Ser Cys Lys Arg Leu Arg  
 145 150 155 160

Ile Met Lys Gly Ser Asp Ala Pro Ala Leu Asp Ser Ser Leu  
 165 170

<210> 777

<211> 1053

<212> DNA

<213> Arabidopsis thaliana

<400> 777

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caggataaag ggtcaactga agttgtattc aaggcaatgg gaagagctat caacaagact	180
gtgaccattg tagagctgat taagagaagg atccctgac ttcacagaa cacatctatt	240
ggatccacag acatcacaga cacatgggaa ccaacagagg aaggccttct acctttggag	300
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tctgttgggt accagtggcc aattcctatt gaggttggta agccaatggg cgatattgat	420
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<210> 778

<211> 350

<212> PRT

<213> *Arabidopsis thaliana*

<400> 778

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20 25 30

Ile Thr Tyr Ala Met Thr Leu Leu Gln Asp Lys Gly Ser Thr Glu Val  
35 40 45

Val Phe Lys Ala Met Gly Arg Ala Ile Asn Lys Thr Val Thr Ile Val  
50 55 60

Glu Leu Ile Lys Arg Arg Ile Pro Asp Leu His Gln Asn Thr Ser Ile  
65 70 75 80

Gly Ser Thr Asp Ile Thr Asp Thr Trp Glu Pro Thr Glu Glu Gly Leu  
85 90 95

Leu Pro Leu Glu Thr Thr Arg His Val Ser Met Ile Thr Ile Thr Leu  
100 105 110

Ser Lys Ile Glu Leu Asn Thr Ser Ser Val Gly Tyr Gln Cys Pro Ile  
115 120 125

Pro Ile Glu Leu Val Lys Pro Met Gly Asp Ile Asp Tyr Glu Gly Arg  
130 135 140

Glu Gly Ser Pro Gly Gly Arg Gly Arg Gly Arg Gly Arg Gly Arg Gly  
145 150 155 160

Arg Gly Arg Gly Arg Gly Gly Arg Gly Asn Ala Tyr Val Asn Val Glu  
165 170 175

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His Glu Asp Gly Gly Trp Glu Arg Glu Gln Ser Tyr Gly Arg Gly Arg  
180 185 190

Gly Arg Gly Arg Gly Arg Ser Ser Arg Gly Arg Gly Arg Gly Gly Tyr  
195 200 205

Asn Gly Pro Pro Asn Glu Tyr Asp Ala Pro Gln Asp Gly Gly Tyr Gly  
210 215 220

Tyr Asp Ala Pro His Glu His Arg Gly Tyr Asp Asp Arg Gly Gly Tyr  
225 230 235 240

Asp Ala Pro Pro Gln Gly Arg Gly Gly Tyr Asp Gly Pro Gln Gly Arg  
245 250 255

Gly Gly Tyr Asp Gly Pro Gln Gly Arg Arg Gly Tyr Asp Gly Pro Pro  
260 265 270

Gln Gly Arg Gly Gly Tyr Asp Gly Pro Ser Gln Gly Arg Gly Gly Tyr  
275 280 285

Asp Gly Pro Ser Gln Gly Arg Gly Gly Tyr Asp Gly Pro Ser Gln Gly  
290 295 300

Arg Gly Gly Tyr Asp Gly Pro Gln Gly Arg Gly Arg Gly Arg Gly Arg  
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340 345 350

<210> 779

<211> 1440

<212> DNA

<213> Arabidopsis thaliana

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gagtctcttg gttacgtact catgtatttc ctgagaggaa gcttaccgtg gcagggacta	660
aaagctggca caaagaagca aaagtatgac agaattagcg agaagaaagt atcaactcct	720
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gctgtgagtg gatacagtc aaagacagca tctgccttta accgcgaccg agtagccgct	1380
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&lt;210&gt; 780

&lt;211&gt; 479

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 780

Met Asp Leu Lys	Met Asp Asn Val Ile	Gly Gly Lys Phe Lys	Leu Gly
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Arg Lys Ile	Gly Gly Gly Ser Phe	Gly Glu Leu Phe Leu Ala Val Ser
20	25	30



Leu Gln Thr Gly Glu Glu Ala Ala Val Lys Leu Glu Pro Ala Lys Thr  
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 Lys His Pro Gln Leu His Tyr Glu Ser Lys Ile Tyr Met Leu Leu Gln  
 50 55 60  
 Gly Gly Ser Gly Ile Pro Ser Leu Lys Trp Phe Gly Val Gln Gly Asp  
 65 70 75 80  
 Tyr Asn Ala Met Val Ile Asp Leu Leu Gly Pro Ser Leu Glu Asp Leu  
 85 90 95  
 Phe Asn Tyr Cys Asn Arg Arg Leu Thr Leu Lys Ala Val Leu Met Leu  
 100 105 110  
 Ala Asp Gln Leu Ile Ser Arg Val Glu Tyr Met His Ser Arg Gly Phe  
 115 120 125  
 Leu His Arg Asp Ile Lys Pro Asp Asn Phe Leu Met Gly Leu Gly Arg  
 130 135 140  
 Lys Ala Asn Gln Val Tyr Ile Ile Asp Phe Gly Leu Ala Lys Lys Tyr  
 145 150 155 160  
 Arg Asp Leu Gln Thr His Arg His Ile Pro Tyr Arg Glu Asn Lys Asn  
 165 170 175  
 Leu Thr Gly Thr Ala Arg Tyr Ala Ser Val Asn Thr His Leu Gly Val  
 180 185 190  
 Glu Gln Ser Arg Arg Asp Asp Leu Glu Ser Leu Gly Tyr Val Leu Met  
 195 200 205  
 Tyr Phe Leu Arg Gly Ser Leu Pro Trp Gln Gly Leu Lys Ala Gly Thr  
 210 215 220  
 Lys Lys Gln Lys Tyr Asp Arg Ile Ser Glu Lys Lys Val Ser Thr Pro  
 225 230 235 240  
 Ile Glu Val Leu Cys Lys Ser Tyr Pro Pro Glu Phe Val Ser Tyr Phe  
 245 250 255  
 Gln Tyr Cys Arg Ser Leu Arg Phe Glu Asp Lys Pro Asp Tyr Ser Tyr  
 260 265 270  
 Leu Lys Arg Leu Phe Arg Asp Leu Phe Ile Arg Glu Gly Tyr Gln Phe  
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Asp Tyr Val Phe Asp Trp Thr Ala Leu Lys His Pro Gln Ser Ser Ala  
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Arg Ser His Ser Ser Thr His Glu Arg His Arg Thr Gly Lys Pro Gly  
305 310 315 320

Met Gly Ala Gly Pro Ser Ala Glu Lys Pro Glu Arg Ile Ser Val Gly  
325 330 335

Asn Ile Arg Asp Lys Phe Ser Gly Ala Val Glu Ala Phe Ala Arg Arg  
340 345 350

Asn Val Arg Gly Pro Ser Pro His Gln Asn His Thr Arg His Arg Thr  
355 360 365

Leu Asp Glu Ile Pro Ser Met Lys Pro Ala Val Asn Met Val Ser Glu  
370 375 380

Lys Gly Arg Asn Thr Ser Arg Tyr Gly Ser Ala Ser Arg Arg Ala Val  
385 390 395 400

Ala Ser Gly Ser Arg Pro Ser Ser Ser Gly Glu Gln Arg Glu Ser Arg  
405 410 415

Asp Ser Ser Arg Val Ala Ser Ser Gly Gly Gly Val Arg Pro Ser Val  
420 425 430

Phe Gln Arg Thr Gln Ala Ala Ala Val Ser Gly Tyr Glu Ser Lys  
435 440 445

Thr Ala Ser Ala Phe Asn Arg Asp Arg Val Ala Ala Ser Arg Thr Ala  
450 455 460

Arg Asp Glu Ala Leu Arg Ser Phe Glu Leu Leu Ser Ile Arg Lys  
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<210> 781

<211> 456

<212> DNA

<213> Arabidopsis thaliana

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aagatgaaga gtacagagga agaagaaatc ggattctcca atttagacga gaatctagt 120  
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<210> 782

<211> 151

<212> PRT

<213> Arabidopsis thaliana

<400> 782

Met Lys Arg Ser Thr Thr Asp Ser Asp Leu Ala Gly Asp Ala His Asn  
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 20 25 30

Ser Asn Leu Asp Glu Asn Leu Val Tyr Glu Val Leu Lys His Val Asp  
 35 40 45

Ala Lys Thr Leu Ala Met Ser Ser Cys Val Ser Lys Ile Trp His Lys  
 50 55 60

Thr Ala Gln Asp Glu Arg Leu Trp Glu Leu Ile Cys Thr Arg His Trp  
 65 70 75 80

Thr Asn Ile Gly Cys Gly Gln Asn Gln Leu Arg Ser Val Val Leu Ala  
 85 90 95

Leu Gly Gly Phe Arg Arg Leu His Ser Leu Tyr Leu Trp Pro Leu Ser  
 100 105 110

Lys Pro Asn Pro Arg Ala Arg Phe Gly Lys Asp Glu Leu Lys Leu Thr  
 115 120 125

Leu Ser Leu Leu Ser Ile Arg Tyr Tyr Glu Lys Met Ser Phe Thr Lys  
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Arg Pro Leu Pro Glu Ser Lys

145

150

&lt;210&gt; 783

&lt;211&gt; 1269

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 783

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&lt;210&gt; 784

&lt;211&gt; 422

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 784

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Ala Pro Arg Pro Asp Phe Phe Ser Ser Pro Ala Ser Asp His Ser Lys
20      25      30

Val Leu Ser Ser Leu Gly Phe Ser Arg Asn Leu Lys Pro Ser Arg Phe
35      40      45

Ser Ser Gly Ile Ser Ser Ser Leu Gln Asn Gly Asn Ala Arg Ser Val
50      55      60

Gln Pro Ile Lys Ala Thr Ala Thr Glu Val Pro Ser Ala Val Arg Arg
65      70      75      80

Ser Ser Ser Ser Gly Lys Thr Lys Val Gly Ile Asn Gly Phe Gly Arg
85      90      95

Ile Gly Arg Leu Val Leu Arg Ile Ala Thr Ser Arg Asp Asp Ile Glu
100     105     110

Val Val Ala Val Asn Asp Pro Phe Ile Asp Ala Lys Tyr Met Ala Tyr
115     120     125

Met Leu Lys Tyr Asp Ser Thr His Gly Asn Phe Lys Gly Ser Ile Asn
130     135     140

Val Ile Asp Asp Ser Thr Leu Glu Ile Asn Gly Lys Lys Val Asn Val
145     150     155     160

Val Ser Lys Arg Asp Pro Ser Glu Ile Pro Trp Ala Asp Leu Gly Ala
165     170     175

Asp Tyr Val Val Glu Ser Ser Gly Val Phe Thr Thr Leu Ser Lys Ala
180     185     190

Ala Ser His Leu Lys Gly Gly Ala Lys Lys Val Ile Ile Ser Ala Pro
195     200     205

Ser Ala Asp Ala Pro Met Phe Val Val Gly Val Asn Glu His Thr Tyr
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Gln Pro Asn Met Asp Ile Val Ser Asn Ala Ser Cys Thr Thr Asn Cys  
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 245 250 255

Gly Leu Met Thr Thr Val His Ala Thr Thr Ala Thr Gln Lys Thr Val  
 260 265 270

Asp Gly Pro Ser Met Lys Asp Trp Arg Gly Gly Arg Gly Ala Ser Gln  
 275 280 285

Asn Ile Ile Pro Ser Ser Thr Gly Ala Ala Lys Ala Val Gly Lys Val  
 290 295 300

Leu Pro Glu Leu Asn Gly Lys Leu Thr Gly Met Ala Phe Arg Val Pro  
 305 310 315 320

Thr Ser Asn Val Ser Val Val Asp Leu Thr Cys Arg Leu Glu Lys Gly  
 325 330 335

Ala Ser Tyr Glu Asp Val Lys Ala Ala Ile Lys His Ala Ser Glu Gly  
 340 345 350

Pro Leu Lys Gly Ile Leu Gly Tyr Thr Asp Glu Asp Val Val Ser Asn  
 355 360 365

Asp Phe Val Gly Asp Ser Arg Ser Ser Ile Phe Asp Ala Asn Ala Gly  
 370 375 380

Ile Gly Leu Ser Lys Ser Phe Val Lys Leu Val Ser Trp Tyr Asp Asn  
 385 390 395 400

Glu Trp Gly Tyr Ser Asn Arg Val Leu Asp Leu Ile Glu His Met Ala  
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Leu Val Ala Ala Ser His  
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<210> 785

<211> 2103

<212> DNA

<213> Arabidopsis thaliana

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gagaagcttg gtattgctgc tgaacatggc tattttctga ggtattcaac caaaactttt 2040  
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<210> 786

<211> 700

<212> PRT

<213> Arabidopsis thaliana

<400> 786

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Val Ala Gly Ile Met Ser Asn Ile Asp Asn Asp Ser Lys Asp Thr Asp  
35 40 45

Leu Ser Pro Lys Asp Arg Ile Ile Ile Val Ala Asn Glu Leu Pro Ile  
50 55 60

Arg Ala Gln Arg Arg Val Asp Gly Asn Gly Ser Gly Ser Ser Ser Ser  
65 70 75 80

Ser Thr Cys Cys Ser Lys Gly Trp Asn Phe Ser Trp Asp Glu Asn Ser  
85 90 95

Leu Leu Leu Gln Leu Lys Asp Gly Leu Gly Asp Glu Ala Ile Glu Val  
100 105 110

Ile Tyr Val Gly Cys Leu Lys Glu Glu Ile Pro Leu Asn Glu Gln Glu  
115 120 125

Glu Val Tyr Gln Ile Leu Leu Glu Ser Phe Lys Cys Val Pro Thr Phe  
130 135 140

Leu Pro Leu Asp Leu Tyr Thr Arg Tyr Tyr His Gly Phe Cys Lys Gln  
145 150 155 160



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Gln Leu Trp Pro Leu Phe His Tyr Met Leu Pro Leu Ser Pro Asp Leu  
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Gly Gly Arg Phe Asp Arg Thr Leu Trp Gln Ala Tyr Val Ser Val Asn  
180 185 190

Lys Ile Phe Ala Asp Arg Ile Met Glu Val Ile Asn Pro Glu Asp Asp  
195 200 205

Phe Val Trp Ile His Asp Tyr His Leu Met Val Leu Pro Thr Phe Leu  
210 215 220

Arg Lys Arg Phe Asn Arg Val Lys Leu Gly Phe Phe Leu His Ser Pro  
225 230 235 240

Phe Pro Ser Ser Glu Ile Tyr Lys Thr Leu Pro Ile Arg Glu Glu Leu  
245 250 255

Leu Arg Ala Leu Leu Asn Ser Asp Leu Ile Gly Phe His Thr Phe Asp  
260 265 270

Tyr Ala Arg His Phe Leu Ser Cys Cys Ser Arg Met Leu Gly Leu Thr  
275 280 285

Tyr Glu Ser Lys Arg Gly Tyr Ile Gly Leu Glu Tyr Tyr Gly Arg Thr  
290 295 300

Val Ser Ile Lys Ile Leu Pro Val Gly Ile His Met Gly Gln Leu Gln  
305 310 315 320

Ser Val Leu Ser Leu Pro Glu Thr Glu Arg Lys Val Gly Glu Leu Ile  
325 330 335

Glu Arg Tyr Gly Arg Lys Gly Arg Thr Met Leu Leu Gly Val Asp Asp  
340 345 350

Met Asp Ile Phe Lys Gly Ile Thr Leu Lys Leu Leu Ala Met Glu Gln  
355 360 365

Leu Leu Met Gln His Pro Glu Trp Gln Gly Lys Val Val Leu Val Gln  
370 375 380

Ile Ala Asn Pro Ala Arg Gly Lys Gly Lys Asp Val Lys Glu Met Gln  
385 390 395 400

Ala Glu Thr Tyr Ser Thr Val Lys Arg Ile Asn Glu Thr Phe Gly Arg  
405 410 415

047-E2F-PCT.ST25.txt

Pro Gly Tyr Asp Pro Ile Val Leu Ile Asp Ala Pro Leu Lys Phe Tyr  
420 425 430

Glu Arg Val Ala Tyr Tyr Val Val Ala Glu Cys Cys Leu Val Thr Ala  
435 440

Val Arg Asp Gly Met Asn Leu Ile Pro Tyr Glu Tyr Ile Val Ser Arg  
450 455 460

Gln Gly Asn Glu Lys Leu Asp Lys Ile Leu Lys Leu Glu Ala Asn Asn  
465 470 475 480

Arg Asn Lys Lys Ser Met Leu Val Val Ser Glu Phe Ile Gly Cys Ser  
485 490 495

Pro Ser Leu Ser Gly Ala Ile Arg Val Asn Pro Trp Asn Val Asp Ala  
500 505 510

Val Ala Asp Ala Met Asp Ser Ala Leu Glu Val Ala Glu Pro Glu Lys  
515 520 525

Gln Leu Arg His Glu Lys His Tyr Lys Tyr Val Ser Thr His Asp Val  
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Gly Tyr Trp Ala Arg Ser Phe Leu Gln Asp Leu Glu Arg Ser Cys Gly  
545 550 555 560

Glu His Gly Arg Arg Arg Cys Trp Gly Ile Gly Phe Gly Leu Ser Phe  
565 570 575

Arg Val Val Ala Leu Asp Gln Ser Phe Arg Lys Leu Ser Met Glu His  
580 585 590

Ile Val Ser Ala Tyr Lys Arg Thr Lys Thr Arg Ala Ile Leu Leu Asp  
595 600 605

Tyr Asp Asp Thr Leu Met Pro Gln Gly Ser Ile Asp Lys Arg Pro Ser  
610 615 620

Ser Lys Ser Ile Asp Ile Leu Asn Thr Leu Cys Arg Asp Lys Gly Asn  
625 630 635 640

Leu Val Phe Ile Val Ser Ala Lys Ser Arg Glu Thr Leu Ser Asp Trp  
645 650 655

Phe Ser Pro Cys Glu Lys Leu Gly Ile Ala Ala Glu His Gly Tyr Phe  
660 665 670

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<212> DNA

<213> Arabidopsis thaliana

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<210> 788

<211> 246

<212> PRT

<213> Arabidopsis thaliana

<400> 788

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 50 55 60  
 Gly Asp Met Leu Arg Ala Ala Val Ala Ser Lys Thr Pro Leu Gly Val  
 65 70 75 80  
 Lys Ala Lys Glu Ala Met Glu Lys Gly Glu Leu Val Ser Asp Asp Leu  
 85 90 95  
 Val Val Gly Ile Ile Asp Glu Ala Met Asn Lys Pro Lys Cys Gln Lys  
 100 105 110  
 Gly Phe Ile Leu Asp Gly Phe Pro Arg Thr Val Thr Gln Ala Glu Lys  
 115 120 125  
 Leu Asp Glu Met Leu Lys Arg Arg Gly Thr Glu Ile Asp Lys Val Leu  
 130 135 140  
 Asn Phe Ala Ile Asp Asp Ala Ile Leu Glu Glu Arg Ile Thr Gly Arg  
 145 150 155 160  
 Trp Ile His Pro Ser Ser Gly Arg Ser Tyr His Thr Lys Phe Ala Pro  
 165 170 175  
 Pro Lys Thr Pro Gly Val Asp Asp Ile Thr Gly Glu Pro Leu Ile Gln  
 180 185 190  
 Arg Lys Asp Asp Asn Ala Asp Val Leu Lys Ser Arg Leu Ala Ala Phe  
 195 200 205  
 His Ser Gln Thr Gln Pro Val Ile Asp Tyr Tyr Ala Lys Lys Ala Val  
 210 215 220  
 Leu Thr Asn Ile Gln Ala Glu Lys Ala Pro Gln Glu Val Thr Ser Glu  
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 Val Lys Lys Ala Leu Ser  
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<210> 789

&lt;211&gt; 1167

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 789

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&lt;210&gt; 790

&lt;211&gt; 388

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 790

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 Page 1239

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165 170 175  
Asn Ala Pro Pro Pro Ala Ser His His Pro Thr Ser Gln Gln Pro Pro  
180 185 190  
Phe His His Leu Asp Ile Pro Ala Ser Ser Thr Gln Leu Gln Gln Gln  
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210 215 220  
Pro Tyr His His Gln Tyr Gly Gln Ala Gln Thr Gly Pro Asn Thr Gly  
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Phe Gln His His Gly Ala Pro Thr Gln His Leu Ser Gln Pro Met Tyr  
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His Ser Gly Asn Arg Pro Pro Ala Ser Gly Gly Pro Gln Phe Pro Gln  
 260 265 270

Gly Gln Pro His Leu Pro Ser Gln Pro Thr Tyr Gln Gly Gly Gly Gln  
 275 280 285

Tyr Arg Gly Asp Tyr Asn Asn Asn Gln Leu Ala Gly Leu Met Ala Gln  
 290 295 300

Asp Arg Gly Pro Ser Trp Met Ala Gly Gln Ser Glu Ser Ser Asn Ile  
 305 310 315 320

Thr His Leu Pro Gly Leu Gly Pro Val Pro Pro Pro Ser Gln Val Gly  
 325 330 335

Pro Gly Gly Gly Pro Pro Pro Arg Pro Ala Pro Ile Ser Ala Glu Met  
 340 345 350

Glu Lys Ala Leu Leu Gln Gln Val Met Ser Leu Thr Pro Glu Gln Ile  
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Asn Leu Leu Pro Pro Glu Gln Arg Asn Gln Val Leu Gln Leu Gln Gln  
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Ile Leu Arg Gln  
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<210> 791

<211> 1020

<212> DNA

<213> Arabidopsis thaliana

<400> 791

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<210> 792

<211> 339

<212> PRT

<213> Arabidopsis thaliana

<400> 792

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Thr Thr Met Glu Asp Lys Ser Ser Ser Asn Leu Asp Ala Ser Arg Lys  
 35 40 45

Ile Arg Thr Lys Thr Lys Lys Pro Lys Phe Leu Ser Leu Lys Leu Glu  
 50 55 60

Leu Asn Thr Ser His Glu Ile Asn Glu Asn Pro Arg Ser Lys Lys Ser  
 65 70 75 80

Lys Lys Lys Asn Asn Asn Lys Lys Gln Ser Lys Lys Lys Glu Pro Asp  
 85 90 95

Thr Thr Pro Phe Lys Glu Lys Lys Arg Ala Glu Thr Thr Thr Thr Leu  
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Leu Phe Asn Ser Ala Thr Asp Ser Thr Ile Ser Ser Ile His Asp Leu  
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145 150 155 160

Asn Leu Ser Pro Tyr Asp Arg Gln Asp His Gly Ser Ser Ser Ser Ser  
165 170 175

Leu Leu Arg Thr Ala Met Arg Lys Gly Ala Ser Glu Glu Glu Glu Thr  
180 185 190

Thr Glu Glu Arg Trp Val Ser Tyr Ser Glu Val Val Glu Glu Val Met  
195 200 205

Ser Arg Ser Gly Thr Pro Arg Cys Cys Gly Gly Gly Asp Gly Asn Asp  
210 215 220

Gly Arg Pro Ser Leu Ala Leu Lys Leu Asp Tyr Glu Gln Ile Met Glu  
225 230 235 240

Ala Trp Ser Asp Lys Gly Thr Leu Tyr Val Asp Gly Glu Pro Pro Gln  
245 250 255

Thr Val Pro Asp Leu His Ala Ser Ala Asp Gly Phe Asn Asp Gly Gly  
260 265 270

Glu Ala Gly Asn Leu Trp Ala Val Pro Glu Met Glu Thr Thr Glu Arg  
275 280 285

Leu Trp Arg Gly His Arg Glu Ala Ser Leu Leu Arg Tyr Lys Glu Lys  
290 295 300

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<210> 793

<211> 1293

<212> DNA

<213> Arabidopsis thaliana

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atgttgatag attacaatct ttttttgatg agcgcctgtcc tcatggatga cgttgatcca    240
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tttctactgt aggggtttatt gttatgcatc ttgaaagacg atactaggat tgtgttttgg    360
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gattttgact ctgatttatg gacaactctt gatgtcactc cacattggta tatattgtct     600
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gaaaactcag atgggttaca tcatataatc tgttttgatt ttacaagaga gagatttggt     720
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<210> 794

<211> 430

<212> PRT

<213> Arabidopsis thaliana

<400> 794

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Asn Thr Leu Ser Asn Ser Glu Ser Phe Lys Lys Met His Ile Gly Lys  
35 40 45

Val Thr Ser Thr Arg Glu Gly Glu Ser Arg Val Ile Met Leu Ile Asp  
50 55 60

Tyr Asn Leu Phe Leu Met Ser Ala Val Leu Met Asp Asp Val Asp Pro  
65 70 75 80

Ser Ile Glu Phe Lys Gly Lys Leu Ser Cys Leu Lys Glu Gln Val Lys  
85 90 95

Ile Ser Gln Val Phe His Cys Glu Gly Leu Leu Leu Cys Ile Leu Lys  
100 105 110

Asp Asp Thr Arg Ile Val Val Trp Asn Pro Tyr Arg Gln Glu Thr Arg  
115 120 125

Trp Ile Ile Pro Arg Tyr Ser His Arg Pro Tyr Val Met Asn Asn Ile  
130 135 140

Arg Tyr Ala Leu Gly Tyr Glu Asn Asn Lys Ser Gly Arg Ser Leu Lys  
145 150 155 160

Leu Leu Arg Phe Ile Asp Tyr Cys Tyr Thr Glu Lys His Ile Cys Trp  
165 170 175

His Glu Ile Tyr Asp Phe Asp Ser Asp Leu Trp Thr Thr Leu Asp Val  
180 185 190

Thr Pro His Trp Tyr Ile Leu Ser Asn Trp Ser Cys Val Gln Gly Val  
195 200 205

Ser Leu Lys Gly Asn Thr Tyr Trp Cys Ala Arg Glu Glu Asn Ser Asp  
210 215 220

Gly Tyr Asn His Ile Ile Cys Phe Asp Phe Thr Arg Glu Arg Phe Gly  
225 230 235 240

Pro Leu Leu Pro Leu Pro Val Asn Val Ile Asp Asn Glu Tyr Glu Tyr  
245 250 255

Val Thr Ser Ser Cys Val Arg Glu Gly Lys Ile Ala Ala Leu Phe Gln  
Page 1245

His Asn Asp Ser Tyr Pro Tyr Glu Leu Glu Ile Trp Ile Thr Thr Lys  
275 280

Ile Glu Ala Glu Met Val Ser Trp Asn Lys Phe Leu Arg Ile Asp Ile  
290 295 300

Glu Pro Asn Asn Asn Ile Met Val Pro Phe Ile Tyr Gly Gly Phe Phe  
305 310 315 320

Ile Asp Glu Glu Lys Lys Lys Val Ala Leu Gly Phe Asp Glu Glu Phe  
325 330 335

Gly Arg Lys Thr Phe Asn Ile Ile Gly Glu Asp Gly Tyr Phe Arg Glu  
340 345 350

Phe Asp Arg Ile Thr Phe Asn Ile Ile Glu Glu Ala Gly Glu Arg Ala  
355 360 365

Gly Val Asn Cys Gly Ser Tyr Val Cys Ser Tyr Val Pro Ser Leu Val  
370 375 380

Arg Ile Lys Lys Pro Ala Gln Gly Lys Arg Lys Arg Gln Ser Ser Leu  
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<210> 795

<211> 1506

<212> DNA

<213> Arabidopsis thaliana

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ggtccggtgt tactttccg tctaggtttt atcgatatgg ttgtgatctc atcaaaagaa 240

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<210> 796

<211> 501

<212> PRT

<213> Arabidopsis thaliana

<400> 796

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047-E2F-PCT.ST25.txt

Pro Pro Lys Leu Pro Ile Ile Gly Asn Leu His Gln Leu Arg Gly Leu  
35 40 45

Phe His Arg Cys Leu His Asp Leu Ser Lys Lys His Gly Pro Val Leu  
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Leu Leu Arg Leu Gly Phe Ile Asp Met Val Val Ile Ser Ser Lys Glu  
65 70 75 80

Ala Ala Glu Glu Val Leu Lys Val His Asp Leu Glu Cys Cys Thr Arg  
85 90 95

Pro Lys Thr Asn Ala Ser Ser Lys Phe Ser Arg Asp Gly Lys Asp Ile  
100 105 110

Ala Phe Ala Pro Tyr Gly Glu Val Ser Arg Glu Leu Arg Lys Leu Ser  
115 120 125

Leu Ile Asn Phe Phe Ser Thr Gln Lys Val Arg Ser Phe Arg Tyr Ile  
130 135 140

Arg Glu Glu Glu Asn Asp Leu Met Val Lys Lys Leu Lys Glu Ser Ala  
145 150 155 160

Lys Lys Lys Asn Thr Val Asp Leu Ser Gln Thr Leu Phe Tyr Leu Val  
165 170 175

Gly Ser Ile Ile Phe Arg Ala Thr Phe Gly Gln Arg Leu Asp Gln Asn  
180 185 190

Lys His Val Asn Lys Glu Lys Ile Glu Glu Leu Met Phe Glu Val Gln  
195 200 205

Lys Val Gly Ser Leu Ser Ser Ser Asp Ile Phe Pro Ala Gly Val Gly  
210 215 220

Trp Phe Met Asp Phe Val Ser Gly Arg His Lys Thr Leu His Lys Val  
225 230 235 240

Phe Val Glu Val Asp Thr Leu Leu Asn His Val Ile Asp Gly His Leu  
245 250 255

Lys Asn Pro Glu Asp Lys Thr Asn Gln Asp Arg Pro Asp Ile Ile Asp  
260 265 270

Ser Ile Leu Glu Thr Ile Tyr Lys Gln Glu Gln Asp Glu Ser Phe Lys  
275 280 285

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 Tyr Phe Asp Trp Arg Leu Ala Glu Glu Asp Lys Asp Ile Asp Met Glu  
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<210> 797

<211> 3504

<212> DNA

&lt;213&gt; Arabidopsis thaliana

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&lt;212&gt; PRT

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&lt;400&gt; 798

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Glu Ala Val Glu Lys Gly Glu Asn Leu Asp Asn Leu Phe Lys Glu Ile  
 50 55 60

Glu Lys Ser Arg Ile Ala Leu Ala Ile Ile Ser Gln Lys Tyr Thr Glu  
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Ser Lys Trp Cys Leu Asn Glu Leu Val Lys Met Lys Glu Leu Glu Gly  
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Lys Leu Val Thr Ile Pro Ile Phe Tyr Asn Val Glu Pro Ala Thr Val  
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Arg Tyr Gln Lys Glu Ala Phe Gly Ala Ala Leu Thr Lys Thr Gln Glu  
 115 120 125

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Glu Thr Thr Leu Ile Asp Lys Ile Val Asp Ala Val Leu Gln Lys Leu  
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Lys Arg Asp Glu Thr Arg Ile Val Glu Val Val Gly Met Pro Gly Ile  
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Gly Lys Ser Thr Leu Leu Lys Ala Phe Tyr Glu Thr Trp Lys Thr Arg  
 245 250 255

Phe Leu Ser Ser Ala Leu Leu Gln Asn Ile Ser Glu Leu Val Lys Ala  
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Met Gly Leu Gly Arg Leu Thr Gly Met Leu Leu Lys Glu Leu Leu Pro  
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Asp Glu Asn Ile Asp Glu Glu Thr Tyr Glu Pro Tyr Lys Glu Lys Leu  
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Leu Lys Asn Thr Val Phe Ile Val Leu Asp Gly Ile Ser Asp Glu Thr  
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His Ile Gln Lys Leu Leu Lys Asp His Arg Lys Trp Ala Lys Lys Gly  
 325 330 335

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 340 345 350

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Ala Cys Phe Arg Ser His Asp Leu Val Tyr Val Lys Ser Leu Leu Asp  
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485 490 495

Lys Asp Met Phe Met Ile Tyr Ile Ser Asp Ser Arg Val Glu Met His  
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Asp Leu Leu Tyr Thr Phe Ala Met Glu Leu Gly Pro Glu Ala Arg Asp  
515 520 525

Asp Asp Gly Arg Gly Arg His Arg Ile Trp His His Asn Gln Asp  
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Ser Val Arg Ser Phe Phe Leu Asp Met Tyr Val Met Lys Thr Asp Val  
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Thr Leu Gly Thr Asp Tyr Leu Lys Asn Met Arg Asn Leu Arg Tyr Leu  
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Lys Phe Tyr Ser Ser His Cys Pro Gln Glu Cys Thr Pro Lys Glu Asn  
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Pro Lys Asn Leu Val Asp Leu Lys Leu Pro Tyr Ser Lys Ile Arg Gln  
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675 680 685

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Ile Ser Glu Thr Leu Tyr Thr Leu Tyr Leu Asp Gly Thr Ala Ile Lys  
755 760 765

Thr Leu Pro Gln Asp Met Val Lys Leu Thr Ser Leu Val Lys Leu Tyr  
770 775 780

Met Lys Asp Cys Glu Met Leu Val Lys Leu Pro Glu Glu Phe Asp Lys  
785 790 795 800

Leu Lys Val Leu Gln Glu Leu Val Cys Ser Gly Cys Lys Arg Leu Ser  
805 810 815

Ser Leu Pro Asp Val Met Lys Asn Met Gln Cys Leu Gln Ile Leu Leu  
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Leu Asp Gly Thr Ala Ile Thr Lys Ile Pro His Ile Ser Ser Leu Glu  
835 840 845

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885 890 895

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Phe Ser Thr Cys Phe Pro Gly Cys Glu Val Pro Ser Trp Phe Cys His  
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Glu Ala Val Gly Ser Val Leu Lys Leu Asn Leu Leu Pro His Trp Asn

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1070 1075 1080

Glu Phe Gly Val Thr Asp Lys Glu Ser Arg Leu Glu Val Leu Lys  
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Cys Gly Leu Arg Leu Val Tyr Ala Ser Asp Glu Pro Gln Lys Thr  
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Thr Arg Asn Gly Ser Ser Asn Thr Thr Thr Ser Ser Gly Ser Val  
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<211> 654

<212> DNA

<213> Arabidopsis thaliana

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caacaacaac agctcactca acagcttcaa tctttctggg agactcaatt caagagagatt   180
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Leu Gln Ser Phe Trp Glu Thr Gln Phe Lys Glu Ile Glu Lys Thr Thr
50         55         60
Asp Phe Lys Asn His Ser Leu Pro Leu Ala Arg Ile Lys Lys Ile Met
65         70         75         80
Lys Ala Asp Glu Asp Val Arg Met Ile Ser Ala Glu Ala Pro Val Val
85         90         95
Phe Ala Arg Ala Cys Glu Met Phe Ile Leu Glu Leu Thr Leu Arg Ser
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100

Trp Asn His Thr Glu Glu Asn Lys Arg Arg Thr Leu Gln Lys Asn Asp  
115 120

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130 135

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145 150 155 160

Ala Glu Ala Ala Thr Ala Ala Gly Tyr Pro Tyr Gly Tyr Leu Pro  
165 170 175

Gly Thr Ala Pro Ile Gly Asn Pro Gly Met Val Met Gly Asn Pro Gly  
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<213> Arabidopsis thaliana

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<211> 462

<212> PRT

<213> Arabidopsis thaliana

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Gly Ser Val Asn Pro Ala Val Lys Lys Phe Ala Gln Ala Gln Asn Cys  
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Leu Leu Pro Met Gly Val Thr Ser Glu Asn Val Ala Gln Arg Phe Gly  
195 200 205

Val Ser Arg Gln Glu Gln Asp Gln Ala Ala Val Asp Ser His Arg Lys  
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Val Lys Thr Lys Leu Val Asp Pro Lys Thr Gly Asp Glu Lys Pro Ile  
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260 265 270

Leu Gly Lys Leu Lys Pro Val Phe Lys Lys Asp Gly Thr Thr Thr Ala  
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Arg Thr Phe Ala Ala Val Gly Val Asp Pro Ala Ile Met Gly Ile Gly  
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Pro Ala Val Ala Ile Pro Ala Ala Val Lys Ala Ala Gly Leu Glu Leu  
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Asp Asp Ile Asp Leu Phe Glu Ile Asn Glu Ala Phe Ala Ser Gln Phe  
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Val Tyr Cys Arg Asn Lys Leu Gly Leu Asp Pro Glu Lys Ile Asn Val  
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Arg Cys Val Ala Thr Leu Leu His Glu Met Lys Arg Arg Gly Lys Asp  
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Cys Arg Phe Gly Val Val Ser Met Cys Ile Gly Thr Gly Met Gly Ala  
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&lt;211&gt; 702

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&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 804

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 Gly Lys Lys Glu Thr Ala Thr Gly Thr Leu Phe Val Gly Ser Asp Gly  
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 His Gly Asn His Pro Glu Lys Asp Ser Glu Asn Cys Lys Glu Lys Asn  
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 Val Val Pro Pro Val Asn Glu Ser Pro His Ala Lys Asp Thr Asp Asp  
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Ala Glu Ala Glu Ala Glu Ala His Val Cys Glu Ser Asp Glu Asp Leu  
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Gln Asp Met Lys Arg Thr Ile Ile Arg Leu Glu Gln Ala Ala His Ser  
565 570 575

Tyr Met Gln Arg Ala Ile Ala Ser Arg Gly Ala Phe Ala Val Leu Tyr  
580 585 590

Gly Arg Tyr Ser Lys His Tyr Ile Lys Lys Pro Glu Val Leu Val Gly  
595 600 605

Arg Ser Thr Glu Asp Leu Ala Val Asp Ile Asp Leu Gly Arg Glu Lys  
610 615 620

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625 630 635 640

Asp Gly Ser Phe His Ile Lys Asn Leu Gly Lys Tyr Ser Ile Ser Val  
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<213> Arabidopsis thaliana

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<212> PRT

<213> Arabidopsis thaliana

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Ser Ser Ala Ser Ser Ser Ala Pro Leu Cys Arg Glu Ser Phe Ile Lys  
35 40 45

Val Pro Glu Pro Gln Ile Leu Pro His Tyr Lys Pro Leu Asp Tyr Val  
50 55 60

Glu Val Leu Ala Gln Ile His Glu Glu Leu Asp Thr Cys Pro Leu Gln  
65 70 75 80

Glu Arg Ser Ile Leu Tyr Leu Leu Gln Tyr Gln Val Phe Arg Gly Leu  
85 90 95

Gly Glu Thr Lys Leu Arg Arg Arg Ser Leu Gln Ser Ala Trp Gln Glu  
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Ala Thr Thr Val His Glu Lys Val Val Phe Gly Ser Trp Leu Arg Tyr  
 115 120  
 Glu Lys Gln Gly Glu Glu Val Ile Thr Asp Leu Leu Ser Ser Cys Gly  
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 Lys Tyr Ser Glu Glu Phe Val Pro Leu Asp Ile Ala Ser Tyr Phe Pro  
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 165 170 175  
 Ser Val Ser Lys Asn Val Val Phe Lys Ile Gly Glu Glu Lys Ile Ala  
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Ser Met Cys Ile Asp Pro Arg Ser Asp Arg Thr Leu Gly Phe Leu Glu  
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 Tyr Glu His Val Glu Asn Trp Thr Thr Ala Asp Cys Trp Met Gln Leu  
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 Tyr Glu Lys Trp Ser Asn Val Asp Asp Ile Gly Ser Leu Ser Val Ile  
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 Tyr Gln Met Leu Glu Ser Asp Ala Cys Lys Gly Val Leu Tyr Phe Arg  
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Gln Ser Leu Leu Leu Leu Arg Leu Asn Cys Pro Glu Ala Ala Met Arg  
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Ser Leu Gln Leu Ala Arg Glu His Ala Ser Ser Asp His Glu Arg Leu  
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Val Tyr Glu Gly Trp Ile Leu Tyr Asp Thr Gly His Cys Glu Glu Gly  
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Leu Gln Lys Ala Lys Glu Ser Ile Gly Ile Lys Arg Ser Phe Glu Ala  
660 665 670

Tyr Phe Leu Gln Ala Tyr Ala Leu Ala Glu Ser Ser Leu Asp Pro Ser  
675 680 685

Ser Ser Ser Thr Val Val Ser Leu Leu Glu Asp Ala Leu Lys Cys Pro  
690 695 700

Ser Asp Arg Leu Arg Lys Gly Gln Ala Leu Asn Asn Leu Gly Ser Val  
705 710 715 720

Tyr Val Asp Cys Glu Lys Leu Asp Leu Ala Ala Asp Cys Tyr Ile Asn  
725 730 735

Ala Leu Lys Val Arg His Thr Arg Ala His Gln Gly Leu Ala Arg Val  
740 745 750

His Phe Leu Arg Asn Asp Lys Ala Ala Ala Tyr Glu Glu Met Thr Arg  
755 760 765

Leu Ile Glu Lys Ala Gln Asn Asn Ala Ser Ala Tyr Glu Lys Arg Ser  
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Glu Tyr Cys Asp Arg Glu Leu Ala Lys Ser Asp Leu Glu Met Val Thr  
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820 825 830

Ala Ile Ala Phe Lys Ala Asp Leu His Leu Leu His Leu Arg Ala Ala  
835 840 845

Phe His Glu His Ile Gly Asp Val Thr Ser Ala Leu Arg Asp Cys Arg  
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<213> *Arabidopsis thaliana*

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Asn Lys Lys Leu Ser Ser Leu Val Asp Trp Pro Asn Ser Glu Asn Phe  
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Ser Trp Asn Tyr Ala Ile Phe Trp Gln Gln Thr Met Ser Arg Ser Gly  
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Gln Gln Val Leu Gly Trp Gly Asp Gly Cys Cys Arg Glu Pro Asn Glu  
85 90 95

Glu Glu Glu Ser Lys Val Val Arg Ser Tyr Asn Phe Asn Asn Met Gly  
100 105 110

Ala Glu Glu Glu Thr Trp Gln Asp Met Arg Lys Arg Val Leu Gln Lys  
115 120 125

Leu His Arg Leu Phe Gly Gly Ser Asp Glu Asp Asn Tyr Ala Leu Ser  
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 180 185 190  
 Cys Phe Arg Ser Phe Met Ala Lys Ser Ala Gly Ile Arg Thr Ile Val  
 195 200 205  
 Met Val Pro Thr Asp Ala Gly Val Leu Glu Leu Gly Ser Val Trp Ser  
 210 215 220  
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 225 230 235 240  
 Arg Arg Val Thr Gln Pro Val Met Val Thr Ser Asn Thr Asn Met Thr  
 245 250 255  
 Gly Gly Ile His Lys Leu Phe Gly Gln Asp Leu Ser Gly Ala His Ala  
 260 265 270  
 Tyr Pro Lys Lys Leu Glu Val Arg Arg Asn Leu Asp Glu Arg Phe Thr  
 275 280 285  
 Pro Gln Ser Trp Glu Gly Tyr Asn Asn Asn Lys Gly Pro Thr Phe Gly  
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 370 375 380  
 Lys Pro Ala Asn Gly Arg Glu Glu Pro Leu Asn His Val Glu Ala Glu  
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385 390 395 400

Arg Gln Arg Arg Glu Lys Leu Asn Gln Arg Phe Tyr Ala Leu Arg Ser  
405 410 415

Val Val Pro Asn Ile Ser Lys Met Asp Lys Ala Ser Leu Leu Gly Asp  
420 425 430

Ala Ile Ser Tyr Ile Lys Glu Leu Gln Glu Lys Val Lys Ile Met Glu  
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Asp Glu Arg Val Gly Thr Asp Lys Ser Leu Ser Glu Ser Asn Thr Ile  
450 455 460

Thr Val Glu Glu Ser Pro Glu Val Asp Ile Gln Ala Met Asn Glu Glu  
465 470 475 480

Val Val Val Arg Val Ile Ser Pro Leu Asp Ser His Pro Ala Ser Arg  
485 490 495

Ile Ile Gln Ala Met Arg Asn Ser Asn Val Ser Leu Met Glu Ala Lys  
500 505 510

Leu Ser Leu Ala Glu Asp Thr Met Phe His Thr Phe Val Ile Lys Ser  
515 520 525

Asn Asn Gly Ser Asp Pro Leu Thr Lys Glu Lys Leu Ile Ala Ala Phe  
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35	40

Gly Phe Gly Phe Ile Thr	Phe Asp Glu Lys Lys Ala Met Asp Glu Ala
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Ile Ala Ala Met Asn Gly Met Asp Leu Asp Gly Arg Thr Ile Thr Val
65

Asp Lys Ala Gln Pro His Gln Gly Gly Ala Gly Arg Asp Asn Asp Gly
85

Asp Arg Gly Arg Asp Arg Gly Tyr Asp Arg Asp Arg Ser Arg Pro Ser
100

Gly Gly Arg Gly Gly Gly Asp Cys Phe Lys Cys Gly Lys Pro Gly His
1275

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Asp Asp Arg Tyr Ser Ser Lys Asp Asp Arg Tyr Ser Ser Lys Asp Asp  
180 185 190

Arg Tyr Gly Ser Arg Asp Gly Gly Gly Ser Arg Tyr Gly Pro Asp Arg  
195 200 205

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Ala Gly Gly Phe His  
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&lt;212&gt; PRT

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Arg Thr Glu Gly Arg Val Phe Tyr Lys Lys Pro Ile Asn Leu Phe Gln
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Gly Lys Glu Arg Asn Ser Val Ile Phe Ser Thr Tyr Phe Ser Phe Ser
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Met Pro Asn Glu Ile Gly Asp Val Leu Ala Phe Val Met Val Pro Ser
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Thr Leu Asp Leu Ser Leu Phe Gly Lys Lys Asp Tyr Ser Ser Ala
85      90      95

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Leu Gly Phe Leu Leu Glu Tyr Ala Lys Asn Glu Thr Val Val Ala Phe
100     105     110

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Glu Phe Asp Ile Ser Lys Arg Gly Asn Arg Ala Arg Val Leu Ile Gly
115     120     125

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Arg Pro Glu Ser Ala Lys Ile Arg Asn Leu Ser Phe Val Gly Asp Leu
130     135     140

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047-E2F-PCT.ST25.txt

Met Met Asp Asp Gly Gly Ile Leu Ser Cys Met Ile Asp Tyr Glu Ala  
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Ser Ser Lys Arg Met Arg Val Arg Phe Arg Lys Arg Gly Ser Ile Lys  
165 170 175

Met Phe Asp Pro Phe Phe Ser Phe Ser Val Asp Leu Glu Lys Leu Trp  
180 185 190

Lys Gly Gly Glu Val Met Val Gly Leu Ser Ser Ala Asn Gly Asn Ser  
195 200 205

Ser Lys Pro His Phe Leu His Ser Trp Ser Phe Glu Ile Trp His Leu  
210 215 220

Asp Pro Ile Trp Val Gln Pro Ala Pro Leu Gly Pro Asn Glu Gly Leu  
225 230 235 240

Lys Pro Asp Val Ser Thr Glu Met Glu Glu Gly Arg Glu Asn Ser Glu  
245 250 255

Cys Ile Trp Arg Met Leu Gly Ala Leu Val Leu Ala Ala Val Cys Gly  
260 265 270

Ala Val Gly Ala Met Ser Ala Met Tyr Leu Trp Thr Ile Cys Ser Val  
275 280 285

Arg Arg Ser Met Ala Val Val Pro Glu Glu Cys Ala Val Ser Ile Val  
290 295 300

Val Val Ala Val Lys Asp Gly Lys Lys  
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<210> 813

<211> 876

<212> DNA

<213> Arabidopsis thaliana

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aaaatcttca gtggaggaaa aatgttgta ctctactag accgggttcc cggtcggt 180  
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## 047-E2F-PCT.ST25.txt

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&lt;210&gt; 814

&lt;211&gt; 291

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 814

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20     25     30
Leu Thr Trp Gly Glu His Arg Gly Lys Ile Phe Ser Gly Gly Lys Met
35     40     45
Leu Ser Leu Ser Leu Asp Arg Val Ser Gly Ser Gly Phe Lys Ser Lys
50     55     60
Lys Glu Tyr Leu Phe Gly Arg Ile Asp Met Gln Leu Lys Leu Val Ala
65     70     75     80
Gly Asn Ser Ala Gly Thr Val Thr Ala Tyr Tyr Leu Ser Ser Glu Gly
85     90     95
Pro Thr His Asp Glu Ile Asp Phe Glu Phe Leu Gly Asn Glu Thr Gly
100    105    110

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Lys Pro Tyr Val Leu His Thr Asn Val Phe Ala Gln Gly Lys Gly Asn  
115 120 125

Arg Glu Gln Gln Phe Tyr Leu Trp Phe Asp Pro Thr Lys Asn Phe His  
130 135 140

Thr Tyr Ser Leu Val Trp Arg Pro Gln His Ile Ile Phe Met Val Asp  
145 150 155 160

Asn Val Pro Ile Arg Val Phe Asn Asn Ala Glu Gln Leu Gly Val Pro  
165 170 175

Phe Pro Lys Asn Gln Pro Met Lys Ile Tyr Ser Ser Leu Trp Asn Ala  
180 185 190

Asp Asp Trp Ala Thr Arg Gly Gly Leu Val Lys Thr Asp Trp Ser Lys  
195 200 205

Ala Pro Phe Thr Ala Tyr Tyr Arg Gly Phe Asn Ala Ala Ala Cys Thr  
210 215 220

Val Ser Ser Gly Ser Ser Phe Cys Asp Pro Lys Phe Lys Ser Ser Phe  
225 230 235 240

Thr Asn Gly Glu Ser Gln Val Ala Asn Glu Leu Asn Ala Tyr Gly Arg  
245 250 255

Arg Arg Leu Arg Trp Val Gln Lys Tyr Phe Met Ile Tyr Asp Tyr Cys  
260 265 270

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Ser Arg Val  
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<211> 1116

<212> DNA

<213> Arabidopsis thaliana

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Page 1280

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<210> 816

<211> 371

<212> PRT

<213> Arabidopsis thaliana

<400> 816

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20 25 30

Asn Gly Ile Arg Thr Leu Thr Trp Arg Lys Glu Thr Lys Arg Lys Lys  
35 40 45

Lys Asn Gln Glu Asp Glu Asn Lys Met Ser Leu Leu Asp Leu Pro Asp  
50 55 60

047-E2F-PCT.ST25.txt

Leu Thr Leu Asp Cys Ile Leu Glu Lys Leu Ser Pro Ser Glu Leu Cys  
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 Ala Met Thr Ser Val Cys Ser Glu Leu Arg Asp Lys Cys Val Ser Asp  
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 His Leu Trp Glu Lys His Met Glu Thr Lys Trp Gly Arg Leu Met Gly  
 100 105 110  
 Asp Ala Ala Ile Gln Glu Trp Lys Ser His Val Ala Thr Ile Met Arg  
 115 120 125  
 Cys Leu Thr Ser Ser Ser Ser Ser Ser Arg Lys Ser Lys Pro Asn Trp  
 130 135 140  
 Ser Ser Arg Phe Val Ala Asn Leu Lys Pro Phe Ala Trp Leu Ser Ser  
 145 150 155 160  
 Asn His Gly Cys Glu Asn Arg Gly Ser Ser Ser Tyr Leu Ala Pro Ile  
 165 170 175  
 Asp Ser Val Met Tyr Trp Tyr Ser Asn Leu Glu Asn Gly Lys Phe Trp  
 180 185 190  
 Phe Pro Ala Gln Val Tyr Asn Arg Glu Asn Gly His Val Gly Phe Met  
 195 200 205  
 Met Ser Cys Tyr Asp Ala Lys Ile Arg Tyr Asp Phe Lys Thr Asp Thr  
 210 215 220  
 Phe Gln Ala Arg Tyr Ser Ala His Gly Arg Arg Ala Ala Glu Glu Lys  
 225 230 235 240  
 Val Thr Trp Gln Arg Leu Arg Pro Ser Gln Asp Asp Thr Lys Ser Arg  
 245 250 255  
 Asp Leu His Val Ser Asp Cys Leu His Gly Leu Arg Pro Gly Asp His  
 260 265 270  
 Phe Glu Ile Gln Trp Arg Arg Thr Lys Glu Phe Pro Tyr Gly Trp Trp  
 275 280 285  
 Phe Gly Ile Val Gly His Leu Gln Asn Cys Asp Gly Val Gln Asn Cys  
 290 295 300  
 Arg Cys Asp Ser Asp Glu Asn Val Val Met Glu Phe Arg Gln Phe Arg  
 305 310 315 320



Pro Glu Ser Pro Trp Arg Arg Thr Val Ile Lys Arg Lys Asp His Arg  
 325 330 335

Glu Thr Gly Asn Glu Glu Asn Gly Phe Tyr Gly Gly Val Lys Lys Leu  
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Ala Leu Glu  
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<211> 1698

<212> DNA

<213> Arabidopsis thaliana

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<211> 565

<212> PRT

<213> *Arabidopsis thaliana*

<400> 818

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 35 40 45

Asn Tyr Asp Arg Leu Asn Val Arg Thr Gly His Tyr Thr Pro Ile Ser  
 50 55 60

Ala Gly His Ser Pro Leu Lys Arg Pro Leu Gln Glu Tyr Ile Arg Tyr  
 65 70 75 80

Gly Val Ile Asn Leu Asp Lys Pro Ala Asn Pro Ser Ser His Glu Val  
 85 90 95

Val Ala Trp Ile Lys Arg Ile Leu Arg Val Glu Lys Thr Gly His Ser  
 100 105 110

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Gly Thr Leu Asp Pro Lys Val Thr Gly Asn Leu Ile Val Cys Ile Asp  
 115 120 125  
 Arg Ala Thr Arg Leu Val Lys Ser Gln Gln Gly Ala Gly Lys Glu Tyr  
 130 135 140  
 Val Cys Val Ala Arg Leu His Ser Ala Val Pro Asp Val Ala Lys Val  
 145 150 155 160  
 Ala Arg Ala Leu Glu Ser Leu Thr Gly Ala Val Phe Gln Arg Pro Pro  
 165 170 175  
 Leu Ile Ser Ala Val Lys Arg Gln Leu Arg Ile Arg Thr Ile Tyr Glu  
 180 185 190  
 Ser Lys Leu Leu Glu Tyr Asp Ala Asp Arg His Leu Val Val Phe Trp  
 195 200 205  
 Val Ser Cys Glu Ala Gly Thr Tyr Ile Arg Thr Met Cys Val His Leu  
 210 215 220  
 Gly Leu Leu Leu Gly Val Gly Gly His Met Gln Glu Leu Arg Arg Val  
 225 230 235 240  
 Arg Ser Gly Ile Leu Gly Glu Asn Asn Asn Met Val Thr Met His Asp  
 245 250 255  
 Val Met Asp Ala Gln Phe Val Tyr Asp Asn Ser Arg Asp Glu Ser Tyr  
 260 265 270  
 Leu Arg Arg Val Ile Met Pro Leu Glu Met Ile Leu Thr Ser Tyr Lys  
 275 280 285  
 Arg Leu Val Val Lys Asp Ser Ala Val Asn Ala Ile Cys Tyr Gly Ala  
 290 295 300  
 Lys Leu Met Ile Pro Gly Leu Leu Arg Phe Glu Asn Asp Ile Asp Val  
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 Gly Thr Glu Val Val Leu Met Thr Thr Lys Gly Glu Ala Ile Ala Val  
 325 330 335  
 Gly Ile Ala Glu Met Thr Thr Ser Val Met Ala Thr Cys Asp His Gly  
 340 345 350  
 Val Val Ala Lys Ile Lys Arg Val Val Met Asp Arg Asp Thr Tyr Pro  
 Page 1285

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 Ile Ala Gly Ala Ala Ala Pro Glu Glu Ile Lys Ala Asp Ala Glu  
 420 425 430  
 Asn Gly Glu Ala Gly Glu Ala Arg Lys Arg Lys His Asp Asp Ser Ser  
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 Asp Ser Pro Ala Pro Val Thr Thr Lys Lys Ser Lys Thr Lys Glu Val  
 450 455 460  
 Glu Gly Glu Glu Ala Glu Glu Lys Val Lys Ser Ser Lys Lys Lys Lys  
 465 470 475 480  
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 485 490 495  
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 500 505 510  
 Val Ala Ser Pro Lys Ser Glu Lys Lys Lys Lys Lys Ser Lys Asp  
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 Glu Lys Lys Lys Lys Lys Lys Asp Lys Lys Lys Lys Asn Lys Asp Ser  
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<210> 819

<211> 1887

<212> DNA

<213> Arabidopsis thaliana

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<210> 820

<211> 628

<212> PRT

<213> Arabidopsis thaliana

<400> 820

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Gly Ser Phe Ala Asp Val Tyr Phe Pro Pro Ser Lys Arg Ser Arg Val  
 35 40 45

Val Ala Pro Thr Ile Phe Ser Ala Phe Glu Lys Lys Pro Val Ser Ile  
 50 55 60

Asp Val Leu Pro Asp Glu Cys Leu Phe Glu Ile Phe Arg Arg Leu Ser  
 65 70 75 80

Gly Pro Gln Glu Arg Ser Ala Cys Ala Phe Val Ser Lys Gln Trp Leu  
 85 90 95

Thr Leu Val Ser Ser Ile Arg Gln Lys Glu Ile Asp Val Pro Ser Lys  
 100 105 110

Ile Thr Glu Asp Gly Asp Asp Cys Glu Gly Cys Leu Ser Arg Ser Leu  
 115 120 125

Asp Gly Lys Lys Ala Thr Asp Val Arg Leu Ala Ala Ile Ala Val Gly  
 130 135 140

Thr Ala Gly Arg Gly Gly Leu Gly Lys Leu Ser Ile Arg Gly Ser Asn  
 145 150 155 160

Ser Ala Lys Val Ser Asp Leu Gly Leu Arg Ser Ile Gly Arg Ser Cys  
 165 170 175

Pro Ser Leu Gly Ser Leu Ser Leu Trp Asn Val Ser Thr Ile Thr Asp  
 180 185 190

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Asn Gly Leu Leu Glu Ile Ala Glu Gly Cys Ala Gln Leu Glu Lys Leu  
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 Glu Leu Asn Arg Cys Ser Thr Ile Thr Asp Lys Gly Leu Val Ala Ile  
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 Ala Lys Ser Cys Pro Asn Leu Thr Glu Leu Thr Leu Glu Ala Cys Ser  
 225 230 235 240  
 Arg Ile Gly Asp Glu Gly Leu Leu Ala Ile Ala Arg Ser Cys Ser Lys  
 245 250 255  
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 260 265 270  
 Ile Ala Ser Leu Leu Ser Asn Thr Thr Cys Ser Leu Ala Lys Leu Lys  
 275 280 285  
 Leu Gln Met Leu Asn Val Thr Asp Val Ser Leu Ala Val Val Gly His  
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 Tyr Gly Leu Ser Ile Thr Asp Leu Val Leu Ala Gly Leu Ser His Val  
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 325 330 335  
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 Leu Glu Ser Val Gly Lys Gly Cys Pro Asn Met Lys Lys Ala Ile Ile  
 355 360 365  
 Ser Lys Ser Pro Leu Leu Ser Asp Asn Gly Leu Val Ser Phe Ala Lys  
 370 375 380  
 Ala Ser Leu Ser Leu Glu Ser Leu Gln Leu Glu Glu Cys His Arg Val  
 385 390 395 400  
 Thr Gln Phe Gly Phe Phe Gly Ser Leu Leu Asn Cys Gly Glu Lys Leu  
 405 410 415  
 Lys Ala Phe Ser Leu Val Asn Cys Leu Ser Ile Arg Asp Leu Thr Thr  
 420 425 430  
 Gly Leu Pro Ala Ser Ser His Cys Ser Ala Leu Arg Ser Leu Ser Ile

435

440

445

Arg Asn Cys Pro Gly Phe Gly Asp Ala Asn Leu Ala Ala Ile Gly Lys  
 450 455 460

Leu Cys Pro Gln Leu Glu Asp Ile Asp Leu Cys Gly Leu Lys Gly Ile  
 465 470 475 480

Thr Glu Ser Gly Phe Leu His Leu Ile Gln Ser Ser Leu Val Lys Ile  
 485 490 495

Asn Phe Ser Gly Cys Ser Asn Leu Thr Asp Arg Val Ile Ser Ala Ile  
 500 505 510

Thr Ala Arg Asn Gly Trp Thr Leu Glu Val Leu Asn Ile Asp Gly Cys  
 515 520 525

Ser Asn Ile Thr Asp Ala Ser Leu Val Ser Ile Ala Ala Asn Cys Gln  
 530 535 540

Ile Leu Ser Asp Leu Asp Ile Ser Lys Cys Ala Ile Ser Asp Ser Gly  
 545 550 555 560

Ile Gln Ala Leu Ala Ser Ser Asp Lys Leu Lys Leu Gln Ile Leu Ser  
 565 570 575

Val Ala Gly Cys Ser Met Val Thr Asp Lys Ser Leu Pro Ala Ile Val  
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Gly Leu Gly Ser Thr Leu Leu Gly Leu Asn Leu Gln Gln Cys Arg Ser  
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Asp Ile Leu Ser  
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<211> 1005

<212> DNA

<213> Arabidopsis thaliana

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 Page 1290



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<210> 822

<211> 334

<212> PRT

<213> Arabidopsis thaliana

<400> 822

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20 25 30

Ser Asp Ser Pro Ser Ser Ser Ala Ala Ser Ala Ser Ala Phe Leu  
35 40 45

His Pro Ser Ala Phe Ser Leu Pro Pro Leu Pro Gly Tyr Tyr Pro Asp  
50 55 60

Ser Thr Phe Leu Thr Gln Pro Phe Ser Tyr Gly Ser Asp Leu Gln Gln  
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65                      70                      75                      80  
 Thr Gly Ser Leu Ile Gly Leu Asn Asn Leu Ser Ser Ser Gln Ile His  
                                  85                                   90  
 Gln Ile Gln Ser Gln Ile His His Pro Leu Pro Pro Thr His His Asn  
                                  100                                   105  
 Asn Asn Asn Ser Phe Ser Asn Leu Leu Ser Pro Lys Pro Leu Leu Met  
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 Lys Gln Ser Gly Val Ala Gly Ser Cys Phe Ala Tyr Gly Ser Gly Val  
                                  130                                   135                                   140  
 Pro Ser Lys Pro Thr Lys Leu Tyr Arg Gly Val Arg Gln Arg His Trp  
                                  145                                   150                                   155                                   160  
 Gly Lys Trp Val Ala Glu Ile Arg Leu Pro Arg Asn Arg Thr Arg Leu  
                                  165                                   170                                   175  
 Trp Leu Gly Thr Phe Asp Thr Ala Glu Glu Ala Ala Leu Ala Tyr Asp  
                                  180                                   185                                   190  
 Lys Ala Ala Tyr Lys Leu Arg Gly Asp Phe Ala Arg Leu Asn Phe Pro  
                                  195                                   200                                   205  
 Asn Leu Arg His Asn Gly Ser His Ile Gly Gly Asp Phe Gly Glu Tyr  
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 Lys Pro Leu His Ser Ser Val Asp Ala Lys Leu Glu Ala Ile Cys Lys  
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 Ser Met Ala Glu Thr Gln Lys Gln Asp Lys Ser Thr Lys Ser Ser Lys  
                                  245                                   250                                   255  
 Lys Arg Glu Lys Lys Val Ser Ser Pro Asp Leu Ser Glu Lys Val Lys  
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 Ala Glu Glu Asn Ser Val Ser Ile Gly Gly Ser Pro Pro Val Thr Glu  
                                  275                                   280                                   285  
 Phe Glu Glu Ser Thr Ala Gly Ser Ser Pro Leu Ser Asp Leu Thr Phe  
                                  290                                   295                                   300  
 Ala Asp Pro Glu Glu Pro Pro Gln Trp Asn Glu Thr Phe Ser Leu Glu  
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<210> 823

<211> 1395

<212> DNA

<213> *Arabidopsis thaliana*

<400> 823

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actctcatct tcactgggtt ctacaacatc gccaccggtc tcctctttga catccctatg      240
cccgctccagc ccatgaaatc catcgccgct gtcgctgtct ccgaatcccc gcacttaact      300
ccttctcaga ttgccgccg tggtgcatcc actgccgcca cgctcctcct cttggcgcc      360
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gctgaagatg gagatctcgc cgagacttcc agcaacgaaa gccagtctcg ccggaggaga      660
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<210> 824

<211> 464

<212> PRT

<213> Arabidopsis thaliana

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35 40 45

Thr Leu Thr Leu Val Ser Asn Leu Asp Leu Ser Thr Thr Leu Ile Phe  
50 55 60

Thr Gly Phe Tyr Asn Ile Ala Thr Gly Leu Leu Phe Asp Ile Pro Met  
65 70 75 80

Pro Val Gln Pro Met Lys Ser Ile Ala Ala Val Ala Val Ser Glu Ser  
85 90 95

Pro His Leu Thr Pro Ser Gln Ile Ala Ala Ala Gly Ala Ser Thr Ala  
100 105 110

Ala Thr Leu Leu Leu Leu Gly Ala Thr Gly Ala Met Ser Phe Leu Tyr  
115 120 125

Asn Ile Ile Pro Leu Pro Val Val Arg Gly Val Gln Leu Ser Gln Gly  
130 135 140

Leu Gln Phe Ala Phe Thr Ala Ile Lys Tyr Val Arg Phe Asn Tyr Asp  
145 150 155 160

Thr Ala Thr Leu Lys Pro Ser Ser Ser Pro Arg Ile Trp Leu Gly Leu  
165 170 175

Asp Gly Leu Ile Leu Ala Leu Ala Leu Leu Phe Ile Ile Leu Ser  
180 185 190

Thr Gly Ser Gly Asn Asp Arg Glu Ala Glu Asp Gly Asp Leu Ala Glu  
195 200 205

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Thr Ser Ser Asn Glu Ser Gln Ser Arg Arg Arg Arg Leu Arg Leu Leu  
210 215 220

Ser Ser Ile Pro Ser Ala Leu Ile Val Phe Ala Leu Gly Leu Val Leu  
225 230 235 240

Cys Phe Ile Arg Asp Pro Ser Ile Phe Lys Asp Leu Lys Phe Gly Pro  
245 250 255

Ser Lys Phe His Ile Leu Arg Ile Ser Trp Asp Asp Trp Lys Ile Gly  
260 265 270

Phe Leu Arg Ala Ala Ile Pro Gln Ile Pro Leu Ser Val Leu Asn Ser  
275 280 285

Val Ile Ala Val Cys Lys Leu Ser Asn Asp Leu Phe Asp Lys Glu Leu  
290 295 300

Ser Ala Thr Thr Val Ser Ile Ser Val Gly Val Met Asn Leu Ile Gly  
305 310 315 320

Cys Trp Phe Gly Ala Met Pro Val Cys His Gly Ala Gly Gly Leu Ala  
325 330 335

Gly Gln Tyr Arg Phe Gly Ala Arg Ser Gly Leu Ser Val Ile Phe Leu  
340 345 350

Gly Ile Gly Lys Leu Ile Val Gly Leu Val Phe Gly Asn Ser Phe Val  
355 360 365

Arg Ile Leu Ser Gln Phe Pro Ile Gly Ile Leu Gly Val Leu Leu Leu  
370 375 380

Phe Ala Gly Ile Glu Leu Ala Met Ala Ser Lys Asp Met Asn Ser Lys  
385 390 395 400

Glu Asp Ser Phe Ile Met Leu Val Cys Ala Ala Val Ser Met Thr Gly  
405 410 415

Ser Ser Ala Ala Leu Gly Phe Gly Cys Gly Val Val Leu Tyr Leu Leu  
420 425 430

Leu Lys Leu Arg Thr Leu Asp Cys Ser Ser Val Thr Leu Phe Ser Arg  
435 440 445

Ser Ser Asp Glu Ser Gln Val Asp Ser Glu Ala Ala Pro Arg Asp Val

450

455

460

&lt;210&gt; 825

&lt;211&gt; 1152

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 825

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&lt;210&gt; 826

&lt;211&gt; 383

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 826

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 20          25          30
Lys Ala Glu Lys His Ile Arg Lys Leu Leu Leu Leu Gly Ala Gly Glu
 35          40          45
Ser Gly Lys Ser Thr Ile Phe Lys Gln Ile Lys Leu Leu Phe Gln Thr
 50          55          60
Gly Phe Asp Glu Gly Glu Leu Lys Ser Tyr Val Pro Val Ile His Ala
 65          70          75          80
Asn Val Tyr Gln Thr Ile Lys Leu Leu His Asp Gly Thr Lys Glu Phe
 85          90          95
Ala Gln Asn Glu Thr Asp Ser Ala Lys Tyr Met Leu Ser Ser Glu Ser
100          105          110
Ile Ala Ile Gly Glu Lys Leu Ser Glu Ile Gly Gly Arg Leu Asp Tyr
115          120          125
Pro Arg Leu Thr Lys Asp Ile Ala Glu Gly Ile Glu Thr Leu Trp Lys
130          135          140
Asp Pro Ala Ile Gln Glu Thr Cys Ala Arg Gly Asn Glu Leu Gln Val
145          150          155          160
Pro Asp Cys Thr Lys Tyr Leu Met Glu Asn Leu Lys Arg Leu Ser Asp
165          170          175
Ile Asn Tyr Ile Pro Thr Lys Glu Asp Val Leu Tyr Ala Arg Val Arg
180          185          190
Thr Thr Gly Val Val Glu Ile Gln Phe Ser Pro Val Gly Glu Asn Lys
195          200          205
Lys Ser Gly Glu Val Tyr Arg Leu Phe Asp Val Gly Gly Gln Arg Asn
210          215          220
Glu Arg Arg Lys Trp Ile His Leu Phe Glu Gly Val Thr Ala Val Ile
225          230          235          240

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Phe Cys Ala Ala Ile Ser Glu Tyr Asp Gln Thr Leu Phe Glu Asp Glu  
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Gln Lys Asn Arg Met Met Glu Thr Lys Glu Leu Phe Asp Trp Val Leu  
260 265 270

Lys Gln Pro Cys Phe Glu Lys Thr Ser Phe Met Leu Phe Leu Asn Lys  
275 280 285

Phe Asp Ile Phe Glu Lys Lys Val Leu Asp Val Pro Leu Asn Val Cys  
290 295 300

Glu Trp Phe Arg Asp Tyr Gln Pro Val Ser Ser Gly Lys Gln Glu Ile  
305 310 315 320

Glu His Ala Tyr Glu Phe Val Lys Lys Lys Phe Glu Glu Leu Tyr Tyr  
325 330 335

Gln Asn Thr Ala Pro Asp Arg Val Asp Arg Val Phe Lys Ile Tyr Arg  
340 345 350

Thr Thr Ala Leu Asp Gln Lys Leu Val Lys Lys Thr Phe Lys Leu Val  
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370 375 380

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<211> 1206

<212> DNA

<213> Arabidopsis thaliana

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caaatcaaat ccgaacatgg atcttcctcg ttaagattca agagagaaca gagcttaagg 180  
aatctagcaa ttcgagccca aaccgctgag acttcaagcc ctacagttac aaaatccgtg 240  
gacggcaaga aaacgttgag gaaaggaaat gtggtggtca ctggagcctc gtctgggtta 300  
ggtctagcca cggctaaagc tctagctgag acaggggaaat ggaacgtgat aatggcgtgc 360  
agagacttcc ttaaagccga gagagctgct aaatccgtag ggatgcctaa agacagctac 420  
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ggggtttatt ggagctggaa caatgcttcg gcttcttttg agaaccagtt atcagaagaa 1140
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<210> 828

<211> 401

<212> PRT

<213> Arabidopsis thaliana

<400> 828

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20     25     30
Leu Phe Gly Ala Ser Ile Thr Asp Gln Ile Lys Ser Glu His Gly Ser
35     40     45
Ser Ser Leu Arg Phe Lys Arg Glu Gln Ser Leu Arg Asn Leu Ala Ile
50     55     60
Arg Ala Gln Thr Ala Ala Thr Ser Ser Pro Thr Val Thr Lys Ser Val
65     70     75     80
Asp Gly Lys Lys Thr Leu Arg Lys Gly Asn Val Val Val Thr Gly Ala
85     90     95

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Ser Ser Gly Leu Gly Leu Ala Thr Ala Lys Ala Leu Ala Glu Thr Gly  
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Lys Trp Asn Val Ile Met Ala Cys Arg Asp Phe Leu Lys Ala Glu Arg  
115 120 125

Ala Ala Lys Ser Val Gly Met Pro Lys Asp Ser Tyr Thr Val Met His  
130 135 140

Leu Asp Leu Ala Ser Leu Asp Ser Val Arg Gln Phe Val Asp Asn Phe  
145 150 155 160

Arg Arg Thr Glu Thr Pro Leu Asp Val Leu Val Cys Asn Ala Ala Val  
165 170 175

Tyr Phe Pro Thr Ala Lys Glu Pro Thr Tyr Ser Ala Glu Gly Phe Glu  
180 185 190

Leu Ser Val Ala Thr Asn His Leu Gly His Phe Leu Leu Ala Arg Leu  
195 200 205

Leu Leu Asp Asp Leu Lys Lys Ser Asp Tyr Pro Ser Lys Arg Leu Ile  
210 215 220

Ile Val Gly Ser Ile Thr Gly Asn Thr Asn Thr Leu Ala Gly Asn Val  
225 230 235 240

Pro Pro Lys Ala Asn Leu Gly Asp Leu Arg Gly Leu Ala Gly Gly Leu  
245 250 255

Asn Gly Leu Asn Ser Ser Ala Met Ile Asp Gly Gly Asp Phe Asp Gly  
260 265 270

Ala Lys Ala Tyr Lys Asp Ser Lys Val Cys Asn Met Leu Thr Met Gln  
275 280 285

Glu Phe His Arg Arg Phe His Glu Glu Thr Gly Val Thr Phe Ala Ser  
290 295 300

Leu Tyr Pro Gly Cys Ile Ala Ser Thr Gly Leu Phe Arg Glu His Ile  
305 310 315 320

Pro Leu Phe Arg Ala Leu Phe Pro Pro Phe Gln Lys Tyr Ile Thr Lys  
325 330 335

Gly Tyr Val Ser Glu Thr Glu Ser Gly Lys Arg Leu Ala Gln Val Val  
340 345 350

Ser Asp Pro Ser Leu Thr Lys Ser Gly Val Tyr Trp Ser Trp Asn Asn  
 355 360 365

Ala Ser Ala Ser Phe Glu Asn Gln Leu Ser Glu Glu Ala Ser Asp Val  
 370 375 380

Glu Lys Ala Arg Lys Val Trp Glu Ile Ser Glu Lys Leu Val Gly Leu  
 385 390 395 400

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<210> 829

<211> 1419

<212> DNA

<213> Arabidopsis thaliana

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 tcacaagaaa gtgttgctgg aacgtcaaat gtgcctgctg tatcggaaaa acccggtggat 240  
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&lt;210&gt; 830

&lt;211&gt; 472

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 830

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Ile Ser Ser Asp Pro Gly Gly Asp Tyr Ala Leu Lys Arg Ala Lys Leu  
 20 25 30

Asp Gln Glu Asn Asp Asn Leu Cys Val Asp Pro Met Gln Val Asp Gln  
 35 40 45

Asn Ser Ser Cys Phe Glu Met Lys Ala Asp Val Leu Ser Gln Glu Ser  
 50 55 60

Val Ala Gly Thr Ser Asn Val Pro Ala Val Ser Glu Lys Pro Val Asp  
 65 70 75 80

Asp Gln Leu Pro Asp Val Met Ile Glu Met Lys Ile Arg Asp Glu Arg  
 85 90 95

Asn Ala Asn Arg Glu Asp Lys Asp Met Glu Thr Thr Val Val Asn Gly  
 100 105 110

Ser Gly Thr Glu Thr Gly Gln Val Ile Thr Thr Thr Val Gly Gly Arg  
 115 120 125

Asp Gly Lys Pro Lys Gln Thr Ile Ser Tyr Met Ala Gln Arg Val Val  
 130 135 140

Gly Thr Gly Ser Phe Gly Val Val Phe Gln Ala Lys Cys Leu Glu Thr  
 145 150 155 160  
 Gly Glu Gln Val Ala Ile Lys Lys Val Leu Gln Asp Lys Arg Tyr Lys  
 165 170 175  
 Asn Arg Glu Leu Gln Ile Met Arg Leu Gln Asp His Pro Asn Val Val  
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 Arg Leu Arg His Ser Phe Phe Ser Thr Thr Asp Lys Asp Glu Leu Tyr  
 195 200 205  
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 Lys His Tyr Thr Lys Met Asn Gln His Met Pro Ile Ile Phe Val Gln  
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 260 265 270  
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 275 280 285  
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 Pro Leu Phe Pro Gly Glu Ser Gly Ile Asp Gln Leu Val Glu Ile Ile  
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 385 390 395 400

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405 410 415

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420 425 430

Pro Asn Gly Arg Ala Leu Pro Pro Leu Phe Asn Phe Thr Ala Gln Glu  
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<210> 831

<211> 1473

<212> DNA

<213> Arabidopsis thaliana

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ggtcacttga catcaaaaag cgacgtttac agtttcggtg tggttcttct cgaaatgctg 1020  
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 gcgagaccgc atctcctgga caaaagaaga ttctaccggt tacttgatcc gaggctggag 1140  
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 cgtgactcca aaataagacc caaaatgagt gaagtgggtg aagtacttaa gcctctccca 1260  
 cacctcaagg acatggctag cgcttcttac tacttcaga caatgcaagc tgaacgtttg 1320  
 aaagctgggt ctgggtctgg ttctggtcgt ggattcgggt caagaaacgg gcaaccagtg 1380  
 tttcggacat tgtctagtcc tcattggtcaa gctggttcgt cgccttatcg tcattcagatt 1440  
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<210> 832

<211> 490

<212> PRT

<213> Arabidopsis thaliana

<400> 832

Met Gly Phe Asp Ser Val Lys Val Met Glu Asn Trp Gln Ser Lys Thr  
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Ser Asn Glu Asn Glu Lys Lys Lys Lys Lys Arg Arg Arg Lys Lys Asn  
 20 25 30

Asn Asn Val Arg Asn Ser Glu His Tyr Glu Glu Glu Ala Asn Gly Cys  
 35 40 45

Trp Val Lys Phe Arg Tyr Ile Val Cys Cys Ala Ser Thr Ser Asp  
 50 55 60

Val Glu Thr Ser Leu Thr Leu Ser Thr Ser Thr Val Gly Ser Gln Ser  
 65 70 75 80

Ala Ile Val Gln Ser Asn Asp Gln Pro Val Gly Pro Val Ser Ser Thr  
 85 90 95

Thr Thr Thr Ser Asn Ala Glu Ser Ser Leu Ser Thr Pro Ile Ile Ser  
 100 105 110

Glu Glu Leu Asn Ile Tyr Ser His Leu Lys Lys Phe Ser Phe Ile Asp  
 115 120 125

047-E2F-PCT.ST25.txt

Leu Lys Leu Ala Thr Arg Asn Phe Arg Pro Glu Ser Leu Leu Gly Glu  
 130 135 140  
 Gly Gly Phe Gly Cys Val Phe Lys Gly Trp Val Glu Glu Asn Gly Thr  
 145 150 155 160  
 Ala Pro Val Lys Pro Gly Thr Gly Leu Thr Val Ala Val Lys Thr Leu  
 165 170 175  
 Asn Pro Asp Gly Leu Gln Gly His Lys Glu Trp Leu Ala Glu Ile Asn  
 180 185 190  
 Tyr Leu Gly Asn Leu Leu His Pro Asn Leu Val Lys Leu Val Gly Tyr  
 195 200 205  
 Cys Ile Glu Asp Asp Gln Arg Leu Leu Val Tyr Glu Phe Met Pro Arg  
 210 215 220  
 Gly Ser Leu Glu Asn His Leu Phe Arg Arg Ser Leu Pro Leu Pro Trp  
 225 230 235 240  
 Ser Ile Arg Met Lys Ile Ala Leu Gly Ala Ala Lys Gly Leu Ser Phe  
 245 250 255  
 Leu His Glu Glu Ala Leu Lys Pro Val Ile Tyr Arg Asp Phe Lys Thr  
 260 265 270  
 Ser Asn Ile Leu Leu Asp Gly Glu Tyr Asn Ala Lys Leu Ser Asp Phe  
 275 280 285  
 Gly Leu Ala Lys Asp Ala Pro Asp Glu Gly Lys Thr His Val Ser Thr  
 290 295 300  
 Arg Val Met Gly Thr Tyr Gly Tyr Ala Ala Pro Glu Tyr Val Met Thr  
 305 310 315 320  
 Gly His Leu Thr Ser Lys Ser Asp Val Tyr Ser Phe Gly Val Val Leu  
 325 330 335  
 Leu Glu Met Leu Thr Gly Arg Arg Ser Met Asp Lys Asn Arg Pro Asn  
 340 345 350  
 Gly Glu His Asn Leu Val Glu Trp Ala Arg Pro His Leu Leu Asp Lys  
 355 360 365  
 Arg Arg Phe Tyr Arg Leu Leu Asp Pro Arg Leu Glu Gly His Phe Ser  
 370 375 380



Val Lys Gly Ala Gln Lys Val Thr Gln Leu Ala Ala Gln Cys Leu Ser  
385 390 395 400

Arg Asp Ser Lys Ile Arg Pro Lys Met Ser Glu Val Val Glu Val Leu  
405 410 415

Lys Pro Leu Pro His Leu Lys Asp Met Ala Ser Ala Ser Tyr Tyr Phe  
420 425 430

Gln Thr Met Gln Ala Glu Arg Leu Lys Ala Gly Ser Gly Ser Gly Ser  
435 440 445

Gly Arg Gly Phe Gly Ser Arg Asn Gly Gln Pro Val Phe Arg Thr Leu  
450 455 460

Ser Ser Pro His Gly Gln Ala Gly Ser Ser Pro Tyr Arg His Gln Ile  
465 470 475 480

Pro Ser Pro Lys Pro Lys Gly Ala Thr Thr  
485 490

<210> 833

<211> 738

<212> DNA

<213> Arabidopsis thaliana

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aacactgtag ctttagatta tcctcgggag aaggatggag cgcgtgttca aatgaggcta 120  
tcgtacactc cagctgctca gtttttactt tttcttgatc aatggactga ttgccatctt 180  
gctggtacac tcggtctgct cagagttctg atttacatga cctatgcgga tgggaaaacc 240  
acaatgtcgg tttatgagag aaaaacaagt attaaagatt tctatgctgt gatatttcgg 300  
tcgtgtttac aactagaaa aggtatcaca gacctggatg atcgtaaaca gaaagaagtc 360  
tgcaaaat ac ggtacagaaa taaagatgag actgaaaagg tcaagctctc ggagattgac 420  
atcgagagag aagaagaatg cgggatttgt atggagatga acaacatggt ggttctccct 480  
aattgtacgc attctttatg catcaagtgt taccgcgatt ggcacgggag gtcagaatca 540  
tgccctttt gccgagacag tcttaagaga gtaaacctcag gggacttatg gatgttaatg 600  
gagaaatccg atacggttaa tatgtatata attgagcggg agaataagaa gaggtgtgtt 660

gtgtatatag agaagctacc tctagtgggt ccagatcaag tgtttgcttc ttctccttat 720  
gattgccatg tcaagtaa 738

<210> 834

<211> 245

<212> PRT

<213> Arabidopsis thaliana

<400> 834

Met Ala Lys Val Ser Phe Lys Asp Ser Leu Lys Ala Leu Glu Ala Asp  
1 5 10 15

Ile Gln His Ala Asn Thr Val Ala Leu Asp Tyr Pro Arg Glu Lys Asp  
20 25 30

Gly Ala Arg Val Gln Met Arg Leu Ser Tyr Thr Pro Ala Ala Gln Phe  
35 40 45

Leu Leu Phe Leu Val Gln Trp Thr Asp Cys His Leu Ala Gly Thr Leu  
50 55 60

Gly Leu Leu Arg Val Leu Ile Tyr Met Thr Tyr Ala Asp Gly Lys Thr  
65 70 75 80

Thr Met Ser Val Tyr Glu Arg Lys Thr Ser Ile Lys Asp Phe Tyr Ala  
85 90 95

Val Ile Phe Pro Ser Leu Leu Gln Leu Glu Arg Gly Ile Thr Asp Leu  
100 105 110

Asp Asp Arg Lys Gln Lys Glu Val Cys Lys Ile Arg Tyr Arg Asn Lys  
115 120 125

Asp Glu Thr Glu Lys Val Lys Leu Ser Glu Ile Asp Ile Glu Arg Glu  
130 135 140

Glu Glu Cys Gly Ile Cys Met Glu Met Asn Asn Met Val Val Leu Pro  
145 150 155 160

Asn Cys Thr His Ser Leu Cys Ile Lys Cys Tyr Arg Asp Trp His Gly  
165 170 175

Arg Ser Glu Ser Cys Pro Phe Cys Arg Asp Ser Leu Lys Arg Val Asn  
180 185 190

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Ser Gly Asp Leu Trp Met Leu Met Glu Lys Ser Asp Thr Val Asn Met  
195 200 205

Tyr Thr Ile Glu Arg Glu Asn Lys Lys Arg Leu Phe Val Tyr Ile Glu  
210 215 220

Lys Leu Pro Leu Val Val Pro Asp Gln Val Phe Ala Ser Ser Pro Tyr  
225 230 235 240

Asp Cys His Val Lys  
245

<210> 835

<211> 1299

<212> DNA

<213> Arabidopsis thaliana

<400> 835  
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gtgaggcatt tatgtaagat tgctcctcta gaagatcttc gtcattgttaa aagggtgaag 180  
aagaagattc tgccagattg cgggtgaaact cagttgactg tcatcttatg tctagcacct 240  
gagcacaacg atcagttgag tgacatgccca cctgatgtgc agagactcgt tgatccctat 300  
gagttgagtc cttttattac acaagtaggt ttttttctc ttatctcacc actatttgct 360  
tcaagggttt ttgattcatt tagcttccaa gtagtcaaat atgctgcggt atccaaagaa 420  
gagtggaag aacaaacaat atatgtcttt gtttatagtg caacagtcaa tgatttttta 480  
ctttttgcat ttggcaatga tagcaatata gatggcatcg gtgggttcag cgaggaggaa 540  
acacaatcaa tctgcaagtt catgagagtt gttattgata tggcagtatc tggtcataca 600  
ccacttgtga atgctgcagt gatagttgat ccttcagtta ggcgaataat agctagttaa 660  
actgatcaag tatatgcac atctgtcctt cgtgacatga ctagcgaga gaccaggccc 720  
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tctgtctctt cttgtctgaa tccctggcaa tggagtttgc agccgatga cactgaaaaa 840  
tgtagccagt ggcattctct taggcatgct tccatggttg ccattgaatc ctcttctgcc 900  
agagatagaa atctgtttcc caatccatcc aagatttttg atcaggatca tgttccgccc 960  
tcaaatatcag attctccggc taaaaagcag aaaaacagca gtcagagtcc agacgtccaa 1020

047-E2F-PCT.ST25.txt

aatgacagca gagaagagac tgtagagat ccttcaatgg aaaggccgta cctctgcact 1080  
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 caaagaataa aacggatttt ctatgctttt ccaaaccacca cggcagggtg tctcgggagt 1200  
 gttcatagac ttcaagggga aaagagtttg aaccatcatt atgcagtgtt tagagttttg 1260  
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<210> 836

<211> 432

<212> PRT

<213> Arabidopsis thaliana

<400> 836

Met Asp Ser Asp Ala Trp Glu Ile Ile His Ile Pro Glu Lys Pro Ser  
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Leu Ser Pro Asp His Gln Pro Thr Val Lys Val Tyr Ala Ser Leu Ile  
 20 25 30

Lys Pro Arg Phe Ala Asn Thr Ile Val Arg His Leu Cys Lys Ile Ala  
 35 40 45

Pro Leu Glu Asp Leu Arg His Val Lys Arg Val Lys Lys Lys Ile Leu  
 50 55 60

Pro Asp Cys Gly Glu Thr Gln Leu Thr Val Ile Leu Cys Leu Ala Pro  
 65 70 75 80

Glu His Asn Asp Gln Leu Ser Asp Met Pro Pro Asp Val Gln Arg Leu  
 85 90 95

Val Asp Pro Tyr Glu Leu Ser Pro Phe Ile Thr Gln Val Gly Tyr Phe  
 100 105 110

Ser Leu Ile Ser Pro Leu Phe Ala Ser Arg Val Phe Asp Ser Phe Ser  
 115 120 125

Phe Gln Val Cys Lys Tyr Ala Ala Val Ser Lys Glu Glu Trp Glu Glu  
 130 135 140

Gln Thr Ile Tyr Val Phe Val Tyr Ser Ala Thr Val Asn Asp Phe Leu  
 145 150 155 160

047-E2F-PCT.ST25.txt

Leu Phe Ala Phe Gly Asn Asp Ser Asn Ile Asp Gly Ile Gly Gly Phe  
165 170 175

Ser Glu Glu Glu Thr Gln Ser Ile Cys Lys Phe Met Arg Val Val Ile  
180 185 190

Asp Met Ala Val Ser Gly His Thr Pro Leu Val Asn Ala Ala Val Ile  
195 200 205

Val Asp Pro Ser Val Arg Arg Ile Ile Ala Ser Glu Thr Asp Gln Val  
210 215 220

Tyr Ala Ser Ser Ala Pro Arg Asp Met Thr Ser Ala Glu Thr Arg Pro  
225 230 235 240

Phe Glu Glu Thr Gly Glu Ile Cys Leu Asn Asp Thr Leu Glu Lys Gln  
245 250 255

Asn Gly Ser Leu Ser Ala Leu Ser Cys Leu Asn Pro Trp Gln Trp Ser  
260 265 270

Leu Gln Pro His Asp Thr Glu Asn Cys Ser Gln Trp His Pro Leu Arg  
275 280 285

His Ala Ser Met Val Ala Ile Glu Ser Ser Ser Ala Arg Asp Arg Asn  
290 295 300

Leu Phe Pro Asn Pro Ser Lys Ile Phe Asp Gln Asp His Val Pro Pro  
305 310 315 320

Ser Asn Thr Asp Ser Pro Ala Lys Lys Gln Lys Thr Ser Ser Gln Ser  
325 330 335

Pro Asp Val Gln Asn Asp Ser Arg Glu Glu Thr Val Arg Asp Pro Ser  
340 345 350

Met Glu Arg Pro Tyr Leu Cys Thr Gly Tyr Asp Ile Phe Leu Leu Leu  
355 360 365

Glu Pro Cys Thr Met Cys Ala Met Ala Leu Val His Gln Arg Ile Lys  
370 375 380

Arg Ile Phe Tyr Ala Phe Pro Asn Thr Thr Ala Gly Gly Leu Gly Ser  
385 390 395 400

Val His Arg Leu Gln Gly Glu Lys Ser Leu Asn His His Tyr Ala Val  
405 410 415

047-E2F-PCT.ST25.txt

Phe Arg Val Leu Leu Pro Asp Asp Ala Leu Arg Gln Met Thr Thr Val  
420 425 430

<210> 837

<211> 774

<212> DNA

<213> Arabidopsis thaliana

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<400> 837
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ctcttcggcc aagagctcgt cggtgataac tccgacaact tatccgcaga accttctgat    180
catcaaacca ctaccaagaa cgatgagagc tctgagaata tcaaggacaa agacaaagaa    240
aaagataagg acaaagacaa agataacaac aacaacagga gattcgagtg tcaactactgc    300
ttcagaaact tcccaacttc tcaagcccta ggtggacatc aaaacgctca caaacgtgaa    360
cgtaacacag ccaaacgcgg ttccatgaca tcataccttc atcatcatca gcctcatgac    420
ctcaccaca tctacggctt cctcaacaac caccaccacc gtcactatcc gtcttggacg    480
acggaagcta gatcatacta cggcggaggg ggacatcaa cgccgtcgta ctactcaagg    540
aatactcttg ctctctcttc ttctaaccba cgcacaatca acggaagtcc tttagggttg    600
tggcgtgtac cgccttccac gtcaacaaat actattcaag gcgtttactc atcttcacca    660
gtttcagcgt ttaggctcga tgagcaagag actaataagg agcctaataa ctggccgtac    720
agattgatga aacccaatgt gcaagatcat gtgagtctcg atcttcatct ctga    774
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<210> 838

<211> 257

<212> PRT

<213> Arabidopsis thaliana

<400> 838

Met Asp Glu Thr Asn Gly Arg Arg Glu Thr His Asp Phe Met Asn Val  
1 5 10 15

Asn Val Glu Ser Phe Ser Gln Leu Pro Phe Ile Arg Arg Thr Pro Pro  
20 25 30

Lys Glu Lys Ala Ala Ile Ile Arg Leu Phe Gly Gln Glu Leu Val Gly  
 35 40 45

Asp Asn Ser Asp Asn Leu Ser Ala Glu Pro Ser Asp His Gln Thr Thr  
 50 55 60

Thr Lys Asn Asp Glu Ser Ser Glu Asn Ile Lys Asp Lys Asp Lys Glu  
 65 70 75 80

Lys Asp Lys Asp Lys Asp Lys Asp Asn Asn Asn Arg Arg Phe Glu  
 85 90 95

Cys His Tyr Cys Phe Arg Asn Phe Pro Thr Ser Gln Ala Leu Gly Gly  
 100 105 110

His Gln Asn Ala His Lys Arg Glu Arg Gln His Ala Lys Arg Gly Ser  
 115 120 125

Met Thr Ser Tyr Leu His His His Gln Pro His Asp Pro His His Ile  
 130 135 140

Tyr Gly Phe Leu Asn Asn His His His Arg His Tyr Pro Ser Trp Thr  
 145 150 155 160

Thr Glu Ala Arg Ser Tyr Tyr Gly Gly Gly Gly His Gln Thr Pro Ser  
 165 170 175

Tyr Tyr Ser Arg Asn Thr Leu Ala Pro Pro Ser Ser Asn Pro Pro Thr  
 180 185 190

Ile Asn Gly Ser Pro Leu Gly Leu Trp Arg Val Pro Pro Ser Thr Ser  
 195 200 205

Thr Asn Thr Ile Gln Gly Val Tyr Ser Ser Ser Pro Ala Ser Ala Phe  
 210 215 220

Arg Ser His Glu Gln Glu Thr Asn Lys Glu Pro Asn Asn Trp Pro Tyr  
 225 230 235 240

Arg Leu Met Lys Pro Asn Val Gln Asp His Val Ser Leu Asp Leu His  
 245 250 255

Leu

<210> 839

<211> 1134

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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<400> 839
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gcggcgcaag gacgtactcg ggtgagcttc ggagcaacgg atctggtttg ttgtcgtact    180
cttcaggga acaccggaaa ggtttattca ttagattgga caccggagag gaaccggatt    240
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tcggttgctg gtggtggatt agacagtgtg tgttctatct ttagccttag ctcaacggcg    420
gacaaggatg gaactgtacc ggtttcaaga atgctcactg gtcacagggg atatgtttcg    480
tgctgtcagt atgtcccaa tgaggatgcc caccattca ccagttcagg tgatcaaaact    540
tgtatcttat gggagtgaac tactggcttc aaaacttctg tttttggcgg tgaatttcag    600
tctggacata ctgctgatgt actaagcgtc tcaatcagt gatcaaaccc aaactggttt    660
atatctgggt catgcgattc cacagcacgg ttgtgggaca ctctgtctgc aagccgagca    720
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tatagatttg ggactggatc agacgatgga acatgcaggc tgtatgacat aaggactggt    840
caccaactcc aggtctatca gccacatggt gatggtgaga acggacctgt cactccatt    900
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aggaatagaa taagctgttt ggggttgta gcagatggaa gtgccttggt tacaggaagt   1080
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&lt;210&gt; 840

&lt;211&gt; 377

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 840

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Met Ser Val Ser Glu Leu Lys Glu Arg His Ala Val Ala Thr Glu Thr
1           5           10           15

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Val Asn Asn Leu Arg Asp Gln Leu Arg Gln Arg Arg Leu Gln Leu Leu  
20 25 30

Asp Thr Asp Val Ala Arg Tyr Ser Ala Ala Gln Gly Arg Thr Arg Val  
35 40 45

Ser Phe Gly Ala Thr Asp Leu Val Cys Cys Arg Thr Leu Gln Gly His  
50 55 60

Thr Gly Lys Val Tyr Ser Leu Asp Trp Thr Pro Glu Arg Asn Arg Ile  
65 70 75 80

Val Ser Ala Ser Gln Asp Gly Arg Leu Ile Val Trp Asn Ala Leu Thr  
85 90 95

Ser Gln Lys Thr His Ala Ile Lys Leu Pro Cys Ala Trp Val Met Thr  
100 105 110

Cys Ala Phe Ser Pro Asn Gly Gln Ser Val Ala Cys Gly Gly Leu Asp  
115 120 125

Ser Val Cys Ser Ile Phe Ser Leu Ser Ser Thr Ala Asp Lys Asp Gly  
130 135 140

Thr Val Pro Val Ser Arg Met Leu Thr Gly His Arg Gly Tyr Val Ser  
145 150 155 160

Cys Cys Gln Tyr Val Pro Asn Glu Asp Ala His Leu Ile Thr Ser Ser  
165 170 175

Gly Asp Gln Thr Cys Ile Leu Trp Asp Val Thr Thr Gly Leu Lys Thr  
180 185 190

Ser Val Phe Gly Gly Glu Phe Gln Ser Gly His Thr Ala Asp Val Leu  
195 200 205

Ser Val Ser Ile Ser Gly Ser Asn Pro Asn Trp Phe Ile Ser Gly Ser  
210 215 220

Cys Asp Ser Thr Ala Arg Leu Trp Asp Thr Arg Ala Ala Ser Arg Ala  
225 230 235 240

Val Arg Thr Phe His Gly His Glu Gly Asp Val Asn Thr Val Lys Phe  
245 250 255

Phe Pro Asp Gly Tyr Arg Phe Gly Thr Gly Ser Asp Asp Gly Thr Cys  
260 265 270

047-E2F-PCT.ST25.txt

Arg Leu Tyr Asp Ile Arg Thr Gly His Gln Leu Gln Val Tyr Gln Pro  
 275 280 285  
 His Gly Asp Gly Glu Asn Gly Pro Val Thr Ser Ile Ala Phe Ser Val  
 290 295 300  
 Ser Gly Arg Leu Leu Phe Ala Gly Tyr Ala Ser Asn Asn Thr Cys Tyr  
 305 310 315 320  
 Val Trp Asp Thr Leu Leu Gly Glu Val Val Leu Asp Leu Gly Leu Gln  
 325 330 335  
 Gln Asp Ser His Arg Asn Arg Ile Ser Cys Leu Gly Leu Ser Ala Asp  
 340 345 350  
 Gly Ser Ala Leu Cys Thr Gly Ser Trp Asp Ser Asn Leu Lys Ile Trp  
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 Ala Phe Gly Gly His Arg Arg Val Ile  
 370 375

<210> 841

<211> 2052

<212> DNA

<213> Arabidopsis thaliana

<400> 841  
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 aagtgcaaaa ccaccaccac cggagaaaca actcccagaa acagaagcct tgtctctctt 300  
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 caaggtacgg cgattttcac ggcggagtgt tctcacacgt ttcattttcc ttgcgtaacc 480  
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 aagtcgttga gagtttacaa cgatgacgaa gctttgattt catctccgat atctccgcc 660  
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## 047-E2F-PCT.ST25.txt

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gctagatttt ag 2052

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&lt;210&gt; 842

&lt;211&gt; 683

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 842

Met Leu Asn Gly Trp Arg Arg Ala Phe Cys Thr Ser Ile Pro Lys Glu  
1 5 10 15

047-E2F-PCT.ST25.txt

Thr Asn Gln Asn Asp Val Asp Asp Asp Gly Leu Val Gly Leu Arg His  
20 25 30

Lys Ser Thr Ser Arg Phe Gly Phe Phe Ser Thr Pro Ser Thr Pro Arg  
35 40 45

Ser Asp Ser Gly Thr Gly Thr Tyr Ser Leu Arg Cys Arg Thr Ser Thr  
50 55 60

Ala Thr Ala Val Ser Thr Thr Ser Ser Leu Pro Gly Thr Pro Lys Leu  
65 70 75 80

Lys Cys Lys Thr Thr Thr Thr Gly Glu Thr Thr Pro Arg Asn Arg Ser  
85 90 95

Leu Val Ser Leu Leu Thr Pro Ser Ser Ser Ser Ile Ser Pro Ala Ser  
100 105 110

Phe Thr Leu Leu Lys Ser Lys Leu Arg Phe Lys Gln Ser Ser Ser Asn  
115 120 125

Lys Cys Gly Ile Cys Leu Gln Ser Val Lys Ser Gly Gln Gly Thr Ala  
130 135 140

Ile Phe Thr Ala Glu Cys Ser His Thr Phe His Phe Pro Cys Val Thr  
145 150 155 160

Ser Arg Ala Ala Ala Asn His Asn Arg Leu Ala Ser Cys Pro Val Cys  
165 170 175

Gly Ser Ser Leu Leu Pro Glu Ile Arg Asn Tyr Ala Lys Pro Glu Ser  
180 185 190

Gln Ile Lys Pro Glu Ile Lys Asn Lys Ser Leu Arg Val Tyr Asn Asp  
195 200 205

Asp Glu Ala Leu Ile Ser Ser Pro Ile Ser Pro Ala Gly Phe His Thr  
210 215 220

Ile Leu Glu Ser Asp Glu Asn Glu Asp Cys Glu Glu Phe Thr Gly Phe  
225 230 235 240

Ser Val Asn Thr Pro Ser Pro Leu Thr Ala Lys Leu Leu Thr Asp Arg  
245 250 255

Asn Val Asp Val Lys Leu Ser Pro Glu Ser Ala Ile Val Ala Ser Gly  
260 265 270

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Lys Gly Tyr Glu Thr Tyr Ser Val Val Met Lys Val Lys Ser Pro Pro  
 275 280 285  
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 305 310 315 320  
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 Arg Leu Ser Ile Ile Ala Phe Ser Ser Ser Lys Arg Leu Ser Pro  
 340 345 350  
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 355 360 365  
 Asp Ile Ile Thr Val Pro Gly Ser Val Ser Gly Val Gly Ile Asp Phe  
 370 375 380  
 Ser Gly Glu Gly Met Ser Val Asn Asp Ala Leu Lys Lys Ala Val Lys  
 385 390 395 400  
 Val Leu Asp Asp Arg Arg Gln Lys Asn Pro Phe Thr Ala Val Phe Val  
 405 410 415  
 Leu Thr Asp Arg Gln Ala His Gln Val Ala Gln Leu Ala His Ser Arg  
 420 425 430  
 Ile Pro Ile His Thr Ile Trp Leu Ser His Ala Ile Pro Glu Asp Ala  
 435 440 445  
 Phe Ala Arg Thr Ile Asn Gly Tyr Leu Ser Leu Ser Val Gln Asp Leu  
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 Gly Leu Gln Leu Gly Ile Val Ser Gly Leu Gly Gln Gly Glu Ile Thr  
 465 470 475 480  
 Ser Val Tyr Ser Leu Ser Gly Arg Pro Ala Trp Leu Gly Thr Gly Ser  
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 Ile Arg Leu Gly Asp Met Tyr Ala Glu Glu Glu Arg Ala Leu Leu Val  
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 Glu Ile Lys Ser Pro Val Asn Asn Ser Leu Thr Gly Ser Arg Ser His

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 Val Arg Ser Ser Ser Asn Pro Asn Ile Ser Arg Leu Arg Asn Leu His  
 565 570 575  
 Val Ser Thr Arg Ala Val Ala Glu Ser Arg Arg Leu Ile Glu Arg Asn  
 580 585 590  
 His Tyr Ser Gly Ala His Arg Leu Leu Thr Ser Ala Arg Ala Leu Leu  
 595 600 605  
 Val Gln His Gly Leu Ser Ser Ser Asp Ala Cys Ile Arg Gly Leu Asp  
 610 615 620  
 Ala Glu Ile Ala Asp Leu Asn Ser Val Lys Gly Arg His Val Ala Ala  
 625 630 635 640  
 Ser Glu Ser Leu Glu Ser Leu Thr Pro Thr Ser Ala Trp Lys Ala Ala  
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<211> 1068

<212> DNA

<213> Arabidopsis thaliana

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 tgtgaagttt gtgaacaagc tcccgcgcgc gtcacttgca aagccgacgc cgccgctctt 240  
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<210> 844

<211> 355

<212> PRT

<213> Arabidopsis thaliana

<400> 844

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Phe Cys Arg Val Asp Ser Ala Phe Leu Cys Ile Ala Cys Asp Thr Arg  
35 40 45

Ile His Ser Phe Thr Arg His Glu Arg Val Trp Val Cys Glu Val Cys  
50 55 60

Glu Gln Ala Pro Ala Ala Val Thr Cys Lys Ala Asp Ala Ala Ala Leu  
65 70 75 80

Cys Val Ser Cys Asp Ala Asp Ile His Ser Ala Asn Pro Leu Ala Ser  
85 90 95

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Arg His Glu Arg Val Pro Val Glu Thr Phe Phe Asp Ser Ala Glu Thr  
100 105 110

Ala Val Ala Lys Ile Ser Ala Ser Ser Thr Phe Gly Ile Leu Gly Ser  
115 120 125

Ser Thr Thr Val Asp Leu Thr Ala Val Pro Val Met Ala Asp Asp Leu  
130 135 140

Gly Leu Cys Pro Trp Leu Leu Pro Asn Asp Phe Asn Glu Pro Ala Lys  
145 150 155 160

Ile Glu Ile Gly Thr Glu Asn Met Lys Gly Ser Ser Asp Phe Met Phe  
165 170 175

Ser Asp Phe Asp Arg Leu Ile Asp Phe Glu Phe Pro Asn Ser Phe Asn  
180 185 190

His His Gln Asn Asn Ala Gly Gly Asp Ser Leu Val Pro Val Gln Thr  
195 200 205

Lys Thr Glu Pro Leu Pro Leu Thr Asn Asn Asp His Cys Phe Asp Ile  
210 215 220

Asp Phe Cys Arg Ser Lys Leu Ser Ala Phe Thr Tyr Pro Ser Gln Ser  
225 230 235 240

Val Ser His Ser Val Ser Thr Ser Ser Ile Glu Tyr Gly Val Val Pro  
245 250 255

Asp Gly Asn Thr Asn Asn Ser Val Asn Arg Ser Thr Ile Thr Ser Ser  
260 265 270

Thr Thr Gly Gly Asp His Gln Ala Ser Ser Met Asp Arg Glu Ala Arg  
275 280 285

Val Leu Arg Tyr Arg Glu Lys Arg Lys Asn Arg Lys Phe Glu Lys Thr  
290 295 300

Ile Arg Tyr Ala Ser Arg Lys Ala Tyr Ala Glu Ser Arg Pro Arg Ile  
305 310 315 320

Lys Gly Arg Phe Ala Lys Arg Thr Glu Thr Glu Asn Asp Asp Ile Phe  
325 330 335

Leu Ser His Val Tyr Ala Ser Ala Ala His Ala Gln Tyr Gly Val Val  
340 345 350



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Pro Thr Phe  
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<210> 845

<211> 708

<212> DNA

<213> Arabidopsis thaliana

<400> 845

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gcagatggaa tgccttctta tctccaacct gatacagaaa ctgattacga tagcgagcct      600
aacttgccctg cagcaccaac aggacacaat ggagctccac atggaagagc tcaggctgag      660
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<210> 846

<211> 235

<212> PRT

<213> Arabidopsis thaliana

<400> 846

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Ile Gln Asp Ala Ser Asp Arg Ile Asn Lys Arg Gly Asp Ser Val Glu
20      25      30
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Asp Lys Ile Lys Lys Leu Asp Val Glu Leu Cys Lys Tyr Lys Glu Gln
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35

40

45

Leu Lys Lys Thr Arg Pro Gly Pro Ala Gln Glu Ala Val Lys Ala Arg  
 50 55 60

Ala Met Arg Val Leu Lys Gln Lys Lys Met Tyr Glu Gly Gln Arg Asp  
 65 70 75 80

Met Leu Tyr Asn Gln Thr Phe Asn Leu Asp Gln Val Ser Phe Ala Ala  
 85 90 95

Glu Gly Leu Lys Asp Ala Gln Gln Thr Met Thr Ala Leu Lys Ser Ala  
 100 105 110

Asn Lys Glu Leu Lys Gly Met Met Lys Thr Val Lys Ile Gln Asp Ile  
 115 120 125

Asp Asn Leu Gln Asp Glu Met Met Asp Leu Met Asp Val Ser Ser Glu  
 130 135 140

Ile Gln Glu Ser Leu Gly Arg Ser Tyr Asn Ile Pro Asp Gly Leu Asp  
 145 150 155 160

Glu Asp Asp Leu Met Gly Glu Leu Asp Ala Leu Glu Ala Asp Met Gly  
 165 170 175

Asn Glu Thr Glu Ala Asp Gly Met Pro Ser Tyr Leu Gln Pro Asp Thr  
 180 185 190

Glu Thr Asp Tyr Asp Ser Glu Leu Asn Leu Pro Ala Ala Pro Thr Gly  
 195 200 205

His Asn Gly Ala Pro His Gly Arg Ala Gln Ala Glu Asp Glu Phe Gly  
 210 215 220

Leu Pro Ala Val Pro Arg Ala Ser Leu Arg Gly  
 225 230 235

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<211> 2115

<212> DNA

<213> Arabidopsis thaliana

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<211> 704

<212> PRT

<213> Arabidopsis thaliana

<400> 848

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 35 40 45

Ser Ala Asp Ala Glu Leu Ser Leu Thr Tyr Ser Asp Glu Asp Gly Asp  
 50 55 60

Val Val Ala Leu Val Asp Asp Asn Asp Leu Phe Asp Val Thr Asn Gln  
 65 70 75 80

Arg Leu Lys Phe Leu Lys Ile Asn Val Asn Ala Gly Val Ser Thr Asn  
 85 90 95

Ser Ala Ala Pro Glu Ser Ser Gly Ser Ser Thr Pro Ala Gly Met Pro  
 100 105 110

Asn Pro Val Ser Lys Ile Gln Lys Gly Ile Asn Asp Val Leu Met Ala  
 115 120 125

Val Pro Asn Pro Met Arg Asp Thr Ile Ser Lys Val Tyr Met Asp Leu  
 130 135 140

Ala Ser Lys Ala Ser Thr Ser Ser Pro Val Val Gly Glu Met Leu Asp  
 145 150 155 160

Cys Ile Ser Lys Leu Gly Gln Leu Ser Ile Pro Gln Glu Ser Ser Pro  
 165 170 175

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Cys Ser Pro Val Thr Lys Pro Gly Ser Ser Gly Ala Ser Leu Ser Arg  
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 Lys Thr Ser Gly His Val Pro Asn Ser Ser Gly Leu Gly Ala Asn Phe  
 225 230 235 240  
 Asn Glu Cys Pro Phe Ser Gly Ser Thr Met Asn Tyr Ser Cys Pro Asn  
 245 250 255  
 Pro Val Asn Leu Asn Lys His Pro Arg Arg Val Cys His Ser Lys Lys  
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 Ser Thr Asn Gly Asp Tyr Trp Thr Ser Leu Gly Val Phe His Lys Gly  
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 Ile Arg Cys Asp Gly Cys Gly Val Leu Pro Ile Thr Gly Pro Arg Phe  
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 Lys Ser Lys Val Lys Glu Asp Tyr Asp Leu Cys Thr Ile Cys Tyr Ser  
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 Val Met Gly Asn Glu Gly Asp Tyr Thr Arg Met Asp Lys Pro Val Ser  
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 Ile Trp Lys Met Arg Asn Ser Gly Ser Leu Val Trp Pro Gln Gly Thr  
 405 410 415  
 Gln Ile Val Trp Ile Gly Gly Asp Arg Phe Cys Asn Ser Leu Ser Val  
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Asp Leu Gln Ile Pro Lys Glu Gly Val Pro Ile Tyr Ser Glu Leu Asp  
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 Tyr Trp Arg Met Ala Thr Ser Asp Gly Ala Lys Phe Gly Gln Arg Val  
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<211> 1461

<212> DNA

<213> *Arabidopsis thaliana*

<400> 849

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<210> 850

<211> 486

<212> PRT

<213> Arabidopsis thaliana

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Pro Pro Glu Lys Thr His Phe Gly Gly Leu Lys Asp Glu Asp Arg Ile  
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Phe Thr Asn Leu Tyr Gly Leu His Asp Pro Phe Leu Lys Gly Ala Met  
 65 70 75 80

Lys Arg Gly Asp Trp His Arg Thr Lys Asp Leu Val Leu Lys Gly Thr  
 85 90 95

Asp Trp Ile Val Asn Glu Met Lys Lys Ser Gly Leu Arg Gly Arg Gly  
 100 105 110

Gly Ala Gly Phe Pro Ser Gly Leu Lys Trp Ser Phe Met Pro Lys Val  
 115 120 125

Ser Asp Gly Arg Pro Ser Tyr Leu Val Val Asn Ala Asp Glu Ser Glu  
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Pro Gly Thr Cys Lys Asp Arg Glu Ile Met Arg His Asp Pro His Lys  
 145 150 155 160

Leu Leu Glu Gly Cys Leu Ile Ala Gly Val Gly Met Arg Ala Ser Ala  
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Ala Tyr Ile Tyr Ile Arg Gly Glu Tyr Val Asn Glu Arg Leu Asn Leu  
180 185 190

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195 200 205

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Gly Ala Tyr Ile Cys Gly Glu Glu Thr Ala Leu Leu Glu Ser Leu Glu  
225 230 235 240

Gly Lys Gln Gly Lys Pro Arg Leu Lys Pro Pro Phe Pro Ala Asn Ala  
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Gly Leu Tyr Gly Cys Pro Thr Thr Val Thr Asn Val Glu Thr Val Ala  
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Val Ser Pro Thr Ile Leu Arg Arg Gly Pro Glu Trp Phe Ser Ser Phe  
275 280 285

Gly Arg Lys Asn Asn Ala Gly Thr Lys Leu Phe Cys Ile Ser Gly His  
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Leu Leu Ala Ile Ile Pro Gly Gly Ser Ser Val Pro Leu Ile Pro Lys  
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Asn Ile Cys Glu Asp Val Leu Met Asp Phe Asp Ala Leu Lys Ala Val  
355 360 365

Gln Ser Gly Leu Gly Thr Ala Ala Val Ile Val Met Asp Lys Ser Thr  
370 375 380

Asp Val Val Asp Ala Ile Ala Arg Leu Ser Tyr Phe Tyr Lys His Glu  
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Ser Cys Gly Gln Cys Thr Pro Cys Arg Glu Gly Thr Gly Trp Leu Trp  
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Met Ile Met Glu Arg Met Lys Val Gly Asn Ala Lys Leu Glu Glu Ile  
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Asp Met Leu Gln Glu Val Thr Lys Gln Ile Glu Gly His Thr Ile Cys  
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<211> 582

<212> DNA

<213> Arabidopsis thaliana

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<211> 193

<212> PRT

<213> Arabidopsis thaliana

<400> 852

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 35 40 45

Pro Asn Val Tyr Asp Phe Gly Thr Pro Tyr Lys Gln Met Phe Asp Glu  
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Leu Arg Arg Lys Asp Pro Glu Leu Tyr Lys Arg Asn Gly Ile Leu Gln  
 65 70 75 80

Met Ile Lys Arg Asn Leu Ser Val Lys Leu Ala Pro Gln Arg Trp Gln  
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Asp Asn Ala Gly Asp Gly Val Phe Asp Val Val Met Thr Phe Glu Glu  
 100 105 110

Lys Val Phe Asp Ser Val Leu Glu Asp Leu Asn Asn Arg Glu Gln Ser  
 115 120 125

Leu Thr Lys Thr Ile Leu Val Met Asn Leu Glu Val Lys Asp Asn His  
 130 135 140

Glu Glu Ala Ala Ile Gly Gly Arg Leu Ala Leu Glu Leu Cys Gln Glu  
 145 150 155 160

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<211> 1545

<212> DNA

<213> Arabidopsis thaliana

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&lt;211&gt; 514

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 854

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 50 55 60

Met Lys Ser Ala His Glu Asn Glu Tyr Cys Arg Phe Asp Ser Gln Leu  
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Leu Thr Leu Phe Thr Ser Ser Leu Tyr Val Ala Ala Leu Val Ser Ser  
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Leu Phe Ala Ser Thr Ile Thr Arg Val Phe Gly Arg Lys Trp Ser Met  
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Phe Leu Gly Gly Phe Thr Phe Phe Ile Gly Ser Ala Phe Asn Gly Phe  
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Ala Gln Asn Ile Ala Met Leu Leu Ile Gly Arg Ile Leu Leu Gly Phe  
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 145 150 155 160

Ala Pro Pro Asn Leu Arg Gly Ala Phe Asn Asn Gly Phe Gln Val Ala  
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Ile Ile Phe Gly Ile Val Val Ala Thr Ile Ile Asn Tyr Phe Thr Ala  
 180 185 190

Gln Met Lys Gly Asn Ile Gly Trp Arg Ile Ser Leu Gly Leu Ala Cys  
 195 200 205

Val Pro Ala Val Met Ile Met Ile Gly Ala Leu Ile Leu Pro Asp Thr  
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Pro Asn Ser Leu Ile Glu Arg Gly Tyr Thr Glu Glu Ala Lys Glu Met  
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 370 375 380  
 Ala Asn Leu Ile Val Ala Leu Ile Cys Ile Tyr Val Ala Gly Phe Ala  
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 420 425 430  
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 450 455 460  
 Thr Ile Phe Ile Tyr Leu Met Leu Pro Glu Thr Lys Asn Val Pro Ile  
 465 470 475 480  
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&lt;210&gt; 855

&lt;211&gt; 1071

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 855

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&lt;210&gt; 856

&lt;211&gt; 356

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 856

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Gly Ser Gln Thr Gly Asn Gly Ile Val Lys Leu Asp Ala Gly Phe Lys
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Val Leu Asn Thr Lys Asn Leu Pro Leu Val Gly Glu Val Gly Phe Gly
210    215    220
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225    230    235    240

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Ser Cys Asp Ser Ala Leu Gln Val Thr Tyr Ile Val Gly Gly Ser Gly  
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Ile Lys Ala Gly Ser Leu Phe Ile Val Pro Arg Phe Phe Val Val Ser  
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Lys Ile Ala Asp Ala Asp Gly Met Ser Trp Phe Ser Ile Val Thr Thr  
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Pro Asp Pro Ile Phe Thr His Leu Ala Gly Asn Thr Ser Val Trp Lys  
305 310 315 320

Ser Leu Ser Pro Glu Val Leu Gln Ala Ala Phe Lys Val Ala Pro Glu  
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<213> Arabidopsis thaliana

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&lt;210&gt; 858

&lt;211&gt; 809

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 858

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 35 40 45

Thr Met Glu Lys Leu Gln Leu Phe Arg Gly Asp Thr Ile Leu Ile Lys  
 50 55 60

Gly Lys Lys Arg Lys Asp Thr Val Cys Ile Ala Leu Ala Asp Glu Thr  
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Cys Glu Glu Pro Lys Ile Arg Met Asn Lys Val Val Arg Ser Asn Leu  
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Arg Val Arg Leu Gly Asp Val Ile Ser Val His Gln Cys Pro Asp Val  
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Lys Tyr Gly Lys Arg Val His Ile Leu Pro Val Asp Asp Thr Val Glu  
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Gly Val Thr Gly Asn Leu Phe Asp Ala Tyr Leu Lys Pro Tyr Phe Leu  
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Glu Ala Tyr Arg Pro Val Arg Lys Gly Asp Leu Phe Leu Val Arg Gly  
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Gly Met Arg Ser Val Glu Phe Lys Val Ile Glu Thr Asp Pro Ala Glu  
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Tyr Cys Val Val Ala Pro Asp Thr Glu Ile Phe Cys Glu Gly Glu Pro  
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Pro Lys Gly Ile Leu Leu Tyr Gly Pro Pro Gly Ser Gly Lys Thr Leu  
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260 265 270

Asn Gly Pro Glu Ile Met Ser Lys Leu Ala Gly Glu Ser Glu Ser Asn  
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Phe Ile Asp Glu Ile Asp Ser Ile Ala Pro Lys Arg Glu Lys Thr Asn  
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Gly Leu Lys Ser Arg Ala His Val Ile Val Met Gly Ala Thr Asn Arg  
340 345 350

Pro Asn Ser Ile Asp Pro Ala Leu Arg Arg Phe Gly Arg Phe Asp Arg  
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Glu Ile Asp Ile Gly Val Pro Asp Glu Ile Gly Arg Leu Glu Val Leu  
370 375 380

Arg Ile His Thr Lys Asn Met Lys Leu Ala Glu Asp Val Asp Leu Glu  
385 390 395 400

Arg Ile Ser Lys Asp Thr His Gly Tyr Val Gly Ala Asp Leu Ala Ala  
405 410 415

Leu Cys Thr Glu Ala Ala Leu Gln Cys Ile Arg Glu Lys Met Asp Val  
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Ala Val Thr Asn Glu His Phe His Thr Ala Leu Gly Asn Ser Asn Pro  
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 Pro Ser Lys Gly Val Leu Phe Tyr Gly Pro Pro Gly Cys Gly Lys Thr  
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 Asn Val Arg Glu Ile Phe Asp Lys Ala Arg Gln Ser Ala Pro Cys Val  
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 675 680 685  
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 Page 1343

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740 745 750

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<211> 1461

<212> DNA

<213> Arabidopsis thaliana

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<210> 860

<211> 486

<212> PRT

<213> Arabidopsis thaliana

<400> 860

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35 40 45

Phe Ala Asn Glu Asn Arg Glu Phe Val Ile Val Gly Gly Gly Asn Ala  
50 55 60

Ala Gly Tyr Ala Ala Arg Thr Phe Val Glu Asn Gly Met Ala Asp Gly  
65 70 75 80

Arg Leu Cys Ile Val Thr Lys Glu Ala Tyr Ala Pro Tyr Glu Arg Pro  
85 90 95

Ala Leu Thr Lys Ala Tyr Leu Phe Pro Pro Glu Lys Lys Pro Ala Arg  
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Leu Pro Gly Phe His Thr Cys Val Gly Gly Gly Gly Glu Arg Gln Thr  
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 Pro Asp Trp Tyr Lys Glu Lys Gly Ile Glu Val Ile Tyr Glu Asp Pro  
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 Val Ala Gly Ala Asp Phe Glu Lys Gln Thr Leu Thr Thr Asp Ala Gly  
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 Lys Gln Leu Lys Tyr Gly Ser Leu Ile Ile Ala Thr Gly Cys Thr  
 165 170 175  
 Ser Arg Phe Pro Asp Lys Ile Gly Gly His Leu Pro Gly Val His Tyr  
 180 185 190  
 Ile Arg Glu Val Ala Asp Ala Asp Ser Leu Ile Ala Ser Leu Gly Lys  
 195 200 205  
 Ala Lys Lys Ile Val Ile Val Gly Gly Gly Tyr Ile Gly Met Glu Val  
 210 215 220  
 Ala Ala Ala Ala Val Ala Trp Asn Leu Asp Thr Thr Ile Val Phe Pro  
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 Glu Asp Gln Leu Leu Gln Arg Leu Phe Thr Pro Ser Leu Ala Gln Lys  
 245 250 255  
 Tyr Glu Glu Leu Tyr Arg Gln Asn Gly Val Lys Phe Val Lys Gly Ala  
 260 265 270  
 Ser Ile Asn Asn Leu Glu Ala Gly Ser Asp Gly Arg Val Ser Ala Val  
 275 280 285  
 Lys Leu Ala Asp Gly Ser Thr Ile Glu Ala Asp Thr Val Val Ile Gly  
 290 295 300  
 Ile Gly Ala Lys Pro Ala Ile Gly Pro Phe Glu Thr Leu Ala Met Asn  
 305 310 315 320  
 Lys Ser Ile Gly Gly Ile Gln Val Asp Gly Leu Phe Arg Thr Ser Thr  
 325 330 335  
 Pro Gly Ile Phe Ala Ile Gly Asp Val Ala Ala Phe Pro Leu Lys Ile  
 340 345 350



Tyr Asp Arg Met Thr Arg Val Glu His Val Asp His Ala Arg Arg Ser  
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Ala Gln His Cys Val Lys Ser Leu Leu Thr Ala His Thr Asp Thr Tyr  
 370 375 380

Asp Tyr Leu Pro Tyr Phe Tyr Ser Arg Val Phe Glu Tyr Glu Gly Ser  
 385 390 395 400

Pro Arg Lys Val Trp Trp Gln Phe Phe Gly Asp Asn Val Gly Glu Thr  
 405 410 415

Val Glu Val Gly Asn Phe Asp Pro Lys Ile Ala Thr Phe Trp Ile Glu  
 420 425 430

Ser Gly Arg Leu Lys Gly Val Leu Val Glu Ser Gly Ser Pro Glu Glu  
 435 440 445

Phe Gln Leu Leu Pro Lys Leu Ala Arg Ser Gln Pro Leu Val Asp Lys  
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Ala Lys Leu Ala Ser Ala Ser Ser Val Glu Glu Ala Leu Glu Ile Ala  
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Gln Ala Ala Leu Gln Ser  
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<210> 861

<211> 2322

<212> DNA

<213> Arabidopsis thaliana

<400> 861

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&lt;210&gt; 862

&lt;211&gt; 773

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 862

Met Gln Arg Pro Pro Pro Glu Asp Phe Ser Leu Lys Glu Thr Arg Pro  
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His Leu Gly Gly Gly Lys Leu Ser Gly Asp Lys Leu Thr Ser Thr Tyr  
 20 25 30

Asp Leu Val Glu Gln Met Gln Tyr Leu Tyr Val Arg Val Val Lys Ala  
 35 40 45

Lys Glu Leu Pro Gly Lys Asp Met Thr Gly Ser Cys Asp Pro Tyr Val  
 50 55 60

Glu Val Lys Leu Gly Asn Tyr Lys Gly Thr Thr Arg His Phe Glu Lys  
 65 70 75 80

Lys Ser Asn Pro Glu Trp Asn Gln Val Phe Ala Phe Ser Lys Asp Arg  
 85 90 95

Ile Gln Ala Ser Phe Leu Glu Ala Thr Val Lys Asp Lys Asp Phe Val  
 100 105 110

Lys Asp Asp Leu Ile Gly Arg Val Val Phe Asp Leu Asn Glu Val Pro  
 115 120 125

Lys Arg Val Pro Pro Asp Ser Pro Leu Ala Pro Gln Trp Tyr Arg Leu  
 130 135 140

Glu Asp Arg Lys Gly Asp Lys Val Lys Gly Glu Leu Met Leu Ala Val  
 145 150 155 160

Trp Phe Gly Thr Gln Ala Asp Glu Ala Phe Pro Glu Ala Trp His Ser  
 165 170 175

Asp Ala Ala Thr Val Ser Gly Thr Asp Ala Leu Ala Asn Ile Arg Ser  
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Lys Val Tyr Leu Ser Pro Lys Leu Trp Tyr Leu Arg Val Asn Val Ile  
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Glu Ala Gln Asp Leu Ile Pro Thr Asp Lys Gln Arg Tyr Pro Glu Val  
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 245 250 255  
 Ala Ala Glu Pro Phe Glu Glu Pro Leu Ile Leu Ser Val Glu Asp Arg  
 260 265 270  
 Val Ala Pro Asn Lys Asp Glu Val Leu Gly Arg Cys Ala Ile Pro Leu  
 275 280 285  
 Gln Tyr Leu Asp Arg Arg Phe Asp His Lys Pro Val Asn Ser Arg Trp  
 290 295 300  
 Tyr Asn Leu Glu Lys His Ile Met Val Asp Gly Glu Lys Lys Glu Thr  
 305 310 315 320  
 Lys Phe Ala Ser Arg Ile His Met Arg Ile Cys Leu Glu Gly Gly Tyr  
 325 330 335  
 His Val Leu Asp Glu Ser Thr His Tyr Ser Ser Asp Leu Arg Pro Thr  
 340 345 350  
 Ala Lys Gln Leu Trp Lys Pro Asn Ile Gly Val Leu Glu Leu Gly Ile  
 355 360 365  
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 370 375 380  
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 385 390 395 400  
 Thr Arg Thr Ile Ile Asp Ser Phe Thr Pro Arg Trp Asn Glu Gln Tyr  
 405 410 415  
 Thr Trp Glu Val Phe Asp Pro Cys Thr Val Val Thr Val Gly Val Phe  
 420 425 430  
 Asp Asn Cys His Leu His Gly Gly Glu Lys Ile Gly Gly Ala Lys Asp  
 435 440 445  
 Ser Arg Ile Gly Lys Val Arg Ile Arg Leu Ser Thr Leu Glu Thr Asp  
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Arg Val Tyr Thr His Ser Tyr Pro Leu Leu Val Leu His Pro Asn Gly  
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 Ser Leu Leu Asn Met Met Tyr Met Tyr Ser Gln Pro Leu Leu Pro Lys  
 500 505 510  
 Met His Tyr Ile His Pro Leu Thr Val Ser Gln Leu Asp Asn Leu Arg  
 515 520 525  
 His Gln Ala Thr Gln Ile Val Ser Met Arg Leu Thr Arg Ala Glu Pro  
 530 535 540  
 Pro Leu Arg Lys Glu Val Val Glu Tyr Met Leu Asp Val Gly Ser His  
 545 550 555 560  
 Met Trp Ser Met Arg Arg Ser Lys Ala Asn Phe Phe Arg Ile Met Gly  
 565 570 575  
 Val Leu Ser Gly Leu Ile Ala Val Gly Lys Trp Phe Glu Gln Ile Cys  
 580 585 590  
 Asn Trp Lys Asn Pro Ile Thr Thr Val Leu Ile His Leu Leu Phe Ile  
 595 600 605  
 Ile Leu Val Leu Tyr Pro Glu Leu Ile Leu Pro Thr Ile Phe Leu Tyr  
 610 615 620  
 Leu Phe Leu Ile Gly Ile Trp Tyr Tyr Arg Trp Arg Pro Arg His Pro  
 625 630 635 640  
 Pro His Met Asp Thr Arg Leu Ser His Ala Asp Ser Ala His Pro Asp  
 645 650 655  
 Glu Leu Asp Glu Glu Phe Asp Thr Phe Pro Thr Ser Arg Pro Ser Asp  
 660 665 670  
 Ile Val Arg Met Arg Tyr Asp Arg Leu Arg Ser Ile Ala Gly Arg Ile  
 675 680 685  
 Gln Thr Val Val Gly Asp Leu Ala Thr Gln Gly Glu Arg Leu Gln Ser  
 690 695 700  
 Leu Leu Ser Trp Arg Asp Pro Arg Ala Thr Ala Leu Phe Val Leu Phe  
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705

710

715

720

Cys Leu Ile Ala Ala Val Ile Leu Tyr Val Thr Pro Phe Gln Val Val  
725 730 735

Ala Leu Cys Ile Gly Ile Tyr Ala Leu Arg His Pro Arg Phe Arg Tyr  
740 745 750

Lys Leu Pro Ser Val Pro Leu Asn Phe Phe Arg Arg Leu Pro Ala Arg  
755 760 765

Thr Asp Cys Met Leu  
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&lt;210&gt; 863

&lt;211&gt; 660

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 863

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&lt;210&gt; 864

&lt;211&gt; 219

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 864

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Ser Ser Asn Gln Gln Pro Asn Arg Val Gln Ile Pro Lys Phe Ala Lys  
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Leu Pro Gln Ile Pro Lys Ser Leu Thr Ser Ser Thr Asp Leu Arg Ser  
 35 40 45

Lys Ala Leu Ser Leu Ser Ser Ala Thr Ala Lys Ser Leu Ala Leu Ile  
 50 55 60

Ala Ala Phe Ala Pro Pro Ser Met Ala Glu Ala Met Glu Lys Ala Gln  
 65 70 75 80

Leu Phe Asp Phe Asn Leu Thr Leu Pro Ile Ile Val Val Glu Phe Leu  
 85 90 95

Phe Leu Met Phe Ala Leu Asp Lys Val Tyr Tyr Ser Pro Leu Gly Asn  
 100 105 110

Phe Met Asp Gln Arg Asp Ala Ser Ile Lys Glu Lys Leu Ala Ser Val  
 115 120 125

Lys Asp Thr Ser Thr Glu Val Lys Glu Leu Asp Glu Gln Ala Ala Ala  
 130 135 140

Val Met Arg Ala Ala Arg Ala Glu Ile Ala Ala Leu Asn Lys Met  
 145 150 155 160

Lys Lys Glu Thr Gln Val Glu Val Glu Glu Lys Leu Ala Glu Gly Arg  
 165 170 175

Lys Lys Val Glu Glu Leu Lys Glu Ala Leu Ala Ser Leu Glu Ser  
 180 185 190

Gln Lys Glu Glu Thr Ile Lys Ala Leu Asp Ser Gln Ile Ala Ala Leu  
 195 200 205

Ser Glu Asp Ile Val Lys Lys Val Leu Pro Ser  
 210 215

&lt;210&gt; 865

&lt;211&gt; 1740

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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&lt;210&gt; 866

&lt;211&gt; 579

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 866

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35 40 45Gln Gly Asn Val Gln Gln Tyr Gly Cys Phe Ser Ile Arg Lys Ser Leu  
50 55 60Ser Gln Ser Arg Lys Phe Ile Arg Thr Val Asp Arg Tyr Ile Lys Arg  
65 70 75 80Asn Ala His Leu Ser Gln Pro Ala Val Ile Arg Ala Leu Gln Asp Cys  
85 90 95Arg Phe Leu Ala Gly Leu Thr Met Asp Tyr Leu Leu Thr Ser Phe Glu  
100 105 110Thr Val Asn Asp Thr Ser Ala Lys Thr Ser Phe Lys Pro Leu Ser Phe  
115 120 125Pro Lys Ala Asp Asp Ile Gln Thr Leu Leu Ser Ala Ala Leu Thr Asn  
130 135 140Glu Gln Thr Cys Leu Glu Gly Leu Thr Thr Ala Ala Ser Tyr Ser Ala  
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165 170 175Lys Leu Leu Gly Val Ser Leu Ala Leu Phe Thr Lys Gly Trp Val Pro  
180 185 190Lys Lys Lys Lys Arg Ala Gly Phe Ala Trp Ala Gln Pro Arg Ser Gly  
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 245 250 255  
 Ser Met Val Leu Ile Ser Asp Ile Val Thr Val Ser Gln Asp Gly Thr  
 260 265 270  
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 275 280 285  
 Thr Asp Gly Ser Ala Gly Phe Phe Leu Ile Tyr Val Thr Ala Gly Ile  
 290 295 300  
 Tyr Glu Glu Tyr Ile Ser Ile Ala Lys Asn Lys Arg Tyr Met Met Met  
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 340 345 350  
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 355 360 365  
 Glu Lys His Gln Ala Val Ala Leu Arg Ser Gly Ala Asp Phe Ser Ile  
 370 375 380  
 Phe Tyr Ser Cys Ser Phe Glu Ala Tyr Gln Asp Thr Leu Tyr Thr His  
 385 390 395 400  
 Ser Leu Arg Gln Phe Tyr Arg Glu Cys Asp Val Tyr Gly Thr Val Asp  
 405 410 415  
 Phe Ile Phe Gly Asn Ala Ala Val Val Phe Gln Asn Cys Asn Leu Tyr  
 420 425 430  
 Pro Arg Lys Pro Met Pro Asn Gln Phe Asn Ala Ile Thr Ala Gln Gly  
 435 440 445

Arg Ser Asp Pro Asn Gln Asn Thr Gly Thr Ser Ile Gln Asn Cys Thr  
 450 455 460

Ile Lys Pro Ala Asp Asp Leu Val Ser Ser Asn Tyr Thr Val Lys Thr  
 465 470 475 480

Tyr Leu Gly Arg Pro Trp Lys Glu Tyr Ser Arg Thr Val Tyr Met Gln  
 485 490 495

Ser Tyr Ile Asp Gly Phe Val Glu Pro Val Gly Trp Arg Glu Trp Asn  
 500 505 510

Gly Asp Phe Ala Leu Ser Thr Leu Tyr Tyr Ala Glu Tyr Asn Asn Thr  
 515 520 525

Gly Pro Gly Ser Asn Thr Thr Asn Arg Val Thr Trp Pro Gly Tyr His  
 530 535 540

Val Ile Asn Ser Thr Asp Ala Ala Asn Phe Thr Val Thr Gly Leu Phe  
 545 550 555 560

Ile Glu Ala Asp Trp Ile Trp Lys Thr Gly Val Pro Tyr Thr Ser Gly  
 565 570 575

Leu Ile Ser

<210> 867

<211> 651

<212> DNA

<213> Arabidopsis thaliana

<400> 867

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cctcaaaact cggcgattt ttactctgag ctgtttcaag ctttaaaact gatcgatcgt	240
gatgacgacg gtgtgttttc cagaggagat ctgcggcgt tgattagcag gtaagtcat	300
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<210> 868

<211> 216

<212> PRT

<213> Arabidopsis thaliana

<400> 868

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 35 40 45  
 Lys Gln Gly Pro Thr Ala Thr Pro Ile Ser Val Leu Pro Gln Asn Ser  
 50 55 60  
 Gly Asp Phe Tyr Thr Glu Leu Val Gln Ala Phe Lys Leu Ile Asp Arg  
 65 70 75 80  
 Asp Asp Asp Gly Val Val Ser Arg Gly Asp Leu Ala Ala Leu Ile Ser  
 85 90 95  
 Arg Leu Ser His Glu Pro Pro Ser Gln Glu Glu Val Ser Leu Met Leu  
 100 105 110  
 Arg Glu Val Asp Gly Gly Asp Gly Gly Cys Ile Ser Leu Glu Asp Leu  
 115 120 125  
 Ala Ser Arg Val Ala Gly Thr Ser Gly Glu Gly Ser Val Glu Thr Glu  
 130 135 140  
 Glu Leu Arg Glu Val Phe Glu Ile Phe Asp Val Asp Arg Asn Gly Lys  
 145 150 155 160  
 Ile Ser Ala Glu Glu Leu His Arg Val Phe Gly Val Ile Gly Asp Glu  
 165 170 175

Arg Cys Thr Leu Glu Glu Cys Met Arg Met Ile Ala Thr Val Asp Gly  
180 185 190

Asn Gly Asp Gly Phe Val Cys Phe Asp Asp Phe Cys Arg Met Met Val  
195 200 205

Pro Ala Met Asn Asp His His His  
210 215

<210> 869

<211> 519

<212> DNA

<213> Arabidopsis thaliana

<400> 869  
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attaactaca ccatctgggc tcagggcaag catttctacc tcggagactg gctctatttc 180  
gtgttcgaca gaaaccagca caatattctt gaagtgaaca agactgacta tgaaggatgt 240  
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aaccagacca agcattacta cttctctgac ggaaaggggtg gatgttacgg tggcatgaag 360  
ctatctgtta aagtagagaa gcttcctcct ccacaaaaat ctgcacctgt caagaacatt 420  
ggatcggttt caatgggtcac aggtctcgct caattcatga ttccgggtatc tctattcgct 480  
ttccctgcaa tgtgggatgt gatctcaagg atgtggtag 519

<210> 870

<211> 172

<212> PRT

<213> Arabidopsis thaliana

<400> 870

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1 5 10 15

Met Ala Ala Pro Met Pro Gly Val Thr Ala Lys Lys Tyr Thr Val Gly  
20 25 30

Glu Asn Lys Phe Trp Asn Pro Asn Ile Asn Tyr Thr Ile Trp Ala Gln  
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40

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Gly Lys His Phe Tyr Leu Gly Asp Trp Leu Tyr Phe Val Phe Asp Arg  
 50 55 60

Asn Gln His Asn Ile Leu Glu Val Asn Lys Thr Asp Tyr Glu Gly Cys  
 65 70 75 80

Ile Ala Asp His Pro Ile Arg Asn Trp Thr Arg Gly Ala Gly Arg Asp  
 85 90 95

Ile Val Thr Leu Asn Gln Thr Lys His Tyr Tyr Leu Leu Asp Gly Lys  
 100 105 110

Gly Gly Cys Tyr Gly Gly Met Lys Leu Ser Val Lys Val Glu Lys Leu  
 115 120 125

Pro Pro Pro Pro Lys Ser Ala Pro Val Lys Asn Ile Gly Ser Val Ser  
 130 135 140

Met Val Thr Gly Leu Ala Gln Phe Met Ile Pro Val Ser Leu Phe Ala  
 145 150 155 160

Phe Pro Ala Met Trp Asp Val Ile Ser Arg Met Trp  
 165 170

<210> 871

<211> 648

<212> DNA

<213> Arabidopsis thaliana

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<210> 872

<211> 215

<212> PRT

<213> Arabidopsis thaliana

<400> 872

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 20 25 30

Asp Leu Met Lys Gly Glu Gln Arg Gln Pro Glu Tyr Leu Ala Ile Gln  
 35 40 45

Pro Phe Gly Lys Ile Pro Val Leu Val Asp Gly Asp Tyr Lys Ile Phe  
 50 55 60

Glu Ser Arg Ala Ile Met Arg Tyr Ile Ala Glu Lys Tyr Arg Ser Gln  
 65 70 75 80

Gly Pro Asp Leu Leu Gly Lys Thr Ile Glu Glu Arg Gly Gln Val Glu  
 85 90 95

Gln Trp Leu Asp Val Glu Ala Thr Ser Tyr His Pro Pro Leu Ala  
 100 105 110

Leu Thr Leu Asn Ile Val Phe Ala Pro Leu Met Gly Phe Pro Ala Asp  
 115 120 125

Glu Lys Val Ile Lys Glu Ser Glu Glu Lys Leu Ala Glu Val Leu Asp  
 130 135 140

Val Tyr Glu Ala Gln Leu Ser Lys Asn Glu Tyr Leu Ala Gly Asp Phe  
 145 150 155 160

Val Ser Leu Ala Asp Leu Ala His Leu Pro Phe Thr Glu Tyr Leu Val  
 165 170 175

Gly Pro Ile Gly Lys Ala His Leu Ile Lys Asp Arg Lys His Val Ser  
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180

Ala Trp Trp Asp Lys Ile Ser Ser Arg Ala Ala Trp Lys Glu Val Ser  
195 200 205

Ala Lys Tyr Ser Leu Pro Val  
210 215

<210> 873

<211> 1410

<212> DNA

<213> Arabidopsis thaliana

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tcttcttccg atatcgataa tattcacgta cctagctact ccagttgggtt ttcattggacc 180  
gacattaacg attgcgaggt ccggtcactg ccggaatttt tcgattcgag atcttcatcc 240  
aaaaacccta agttttatct ctacttgagg aactcgatta ttaagcagta cagagacgac 300  
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<210> 874

<211> 469

<212> PRT

<213> Arabidopsis thaliana

<400> 874

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Ser Lys Ser Ala Gln Leu Pro Ser Ser Ser Asp Ile Asp Asn Ile  
35 40 45

His Val Pro Ser Tyr Ser Ser Trp Phe Ser Trp Thr Asp Ile Asn Asp  
50 55 60

Cys Glu Val Arg Ser Leu Pro Glu Phe Phe Asp Ser Arg Ser Ser Ser  
65 70 75 80

Lys Asn Pro Lys Phe Tyr Leu Tyr Leu Arg Asn Ser Ile Ile Lys Gln  
85 90 95

Tyr Arg Asp Asp His Pro Arg Lys Ile Ser Phe Thr Asp Val Arg Arg  
100 105 110

Thr Leu Val Ser Asp Val Val Ser Ile Arg Arg Val Phe Asp Phe Leu  
115 120 125

Asp Ser Trp Gly Leu Ile Asn Tyr Asn Ser Ser Ala Ser Ala Lys Pro  
130 135 140

Leu Lys Trp Glu Glu Lys Glu Ala Gly Lys Ser Ala Gly Asp Ala Ala  
145 150 155 160

Ser Glu Pro Ala Thr Thr Val Lys Glu Thr Ala Lys Arg Asn Cys Asn  
165 170 175

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Gly Cys Lys Ala Ile Cys Ser Ile Ala Cys Phe Ala Cys Asp Lys Tyr  
180 185 190

Asp Leu Thr Leu Cys Ala Arg Cys Tyr Val Arg Ser Asn Tyr Arg Val  
195 200 205

Gly Ile Asn Ser Ser Glu Phe Lys Arg Val Glu Ile Ser Glu Glu Ser  
210 215 220

Lys Pro Glu Trp Ser Asp Lys Glu Ile Leu Leu Leu Glu Ala Val  
225 230 235 240

Met His Tyr Gly Asp Asp Trp Lys Lys Val Ala Ser His Val Ile Gly  
245 250 255

Arg Thr Glu Lys Asp Cys Val Ser Gln Phe Val Lys Leu Pro Phe Gly  
260 265 270

Glu Gln Phe Val Lys Glu Ser Asp Ser Glu Asp Gly Leu Glu Met Phe  
275 280 285

Asp Gln Ile Lys Asp Ser Asp Ile Pro Glu Ser Glu Gly Ile Asp Lys  
290 295 300

Asp Gly Ser Ser Pro Asn Lys Arg Ile Lys Leu Thr Pro Leu Ala Asp  
305 310 315 320

Ala Ser Asn Pro Ile Met Ala Gln Ala Ala Phe Leu Ser Ala Leu Ala  
325 330 335

Gly Thr Asn Val Ala Glu Ala Ala Ala Arg Ala Ala Val Arg Ala Leu  
340 345 350

Ser Asp Val Asp Tyr Glu Ala Asp Lys Asn Ala Ser Arg Asp Pro Asn  
355 360 365

Arg Gln Asp Ala Asn Ala Ala Ser Ser Gly Glu Thr Thr Arg Asn Glu  
370 375 380

Ser Glu Arg Ala Trp Ala Asp Ala Lys Ser Leu Ile Glu Lys Glu Glu  
385 390 395 400

His Glu Val Glu Gly Ala Ile Lys Glu Thr Val Glu Val Glu Met Lys  
405 410 415

Lys Ile Arg Asp Arg Ile Val His Phe Glu Lys Leu Asp Leu Glu Met  
420 425 430

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Glu Arg Ser Arg Lys Gln Leu Glu Glu Val Arg Asn Leu Leu Phe Val  
435 440 445

Asp Gln Leu Asn Ile Phe Phe His Thr Arg Lys Ala Arg Lys Thr Glu  
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Asp Arg Ile Glu Cys  
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<210> 875

<211> 1092

<212> DNA

<213> Arabidopsis thaliana

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<210> 876

<211> 363

<212> PRT

<213> *Arabidopsis thaliana*

<400> 876

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20 25 30

Lys Asp Gly Asp Leu Arg Val Asn Lys Asp Gly Val Arg Ile Ile Ser  
35 40 45

Gln Leu Glu Pro Glu Val Leu Ser Pro Ile Lys Pro Ala Asp Asp Gln  
50 55 60

Leu Ser Leu Ser Asp Leu Asp Met Val Lys Val Ile Gly Lys Gly Ser  
65 70 75 80

Ser Gly Val Val Gln Leu Val Gln His Lys Trp Thr Gly Gln Phe Phe  
85 90 95

Ala Leu Lys Val Ile Gln Leu Asn Ile Asp Glu Ala Ile Arg Lys Ala  
100 105 110

Ile Ala Gln Glu Leu Lys Ile Asn Gln Ser Ser Gln Cys Pro Asn Leu  
115 120 125

Val Thr Ser Tyr Gln Ser Phe Tyr Asp Asn Gly Ala Ile Ser Leu Ile  
130 135 140

Leu Glu Tyr Met Asp Gly Gly Ser Leu Ala Asp Phe Leu Lys Ser Val  
145 150 155 160

Lys Ala Ile Pro Asp Ser Tyr Leu Ser Ala Ile Phe Arg Gln Val Leu  
165 170 175

Gln Gly Leu Ile Tyr Leu His His Asp Arg His Ile Ile His Arg Asp  
180 185 190

Leu Lys Pro Ser Asn Leu Leu Ile Asn His Arg Gly Glu Val Lys Ile  
195 200 205

Thr Asp Phe Gly Val Ser Thr Val Met Thr Asn Thr Ala Gly Leu Ala  
 210 215 220

Asn Thr Phe Val Gly Thr Tyr Asn Tyr Met Ser Pro Glu Arg Ile Val  
 225 230 235 240

Gly Asn Lys Tyr Gly Asn Lys Ser Asp Ile Trp Ser Leu Gly Leu Val  
 245 250 255

Val Leu Glu Cys Ala Thr Gly Lys Phe Pro Tyr Ala Pro Pro Asn Gln  
 260 265 270

Glu Glu Thr Trp Thr Ser Val Phe Glu Leu Met Glu Ala Ile Val Asp  
 275 280 285

Gln Pro Pro Pro Ala Leu Pro Ser Gly Asn Phe Ser Pro Glu Leu Ser  
 290 295 300

Ser Phe Ile Ser Thr Cys Leu Gln Lys Asp Pro Asn Ser Arg Ser Ser  
 305 310 315 320

Ala Lys Glu Leu Met Glu His Pro Phe Leu Asn Lys Tyr Asp Tyr Ser  
 325 330 335

Gly Ile Asn Leu Ala Ser Tyr Phe Thr Asp Ala Gly Ser Pro Leu Ala  
 340 345 350

Thr Leu Gly Asn Leu Ser Gly Thr Phe Ser Val  
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<210> 877

<211> 1458

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 878

&lt;211&gt; 485

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 878

Met Ala Leu Leu Val Glu Lys Thr Ser Ser Gly Arg Glu Tyr Lys Val  
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Lys Asp Met Ser Gln Ala Asp Phe Gly Arg Leu Glu Leu Glu Leu Ala  
 20 25 30

Glu Val Glu Met Pro Gly Leu Met Ala Cys Arg Thr Glu Phe Gly Pro  
 35 40 45

047-E2F-PCT.ST25.txt

Ser Gln Pro Phe Lys Gly Ala Arg Ile Thr Gly Ser Leu His Met Thr  
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 65 70 75 80  
 Val Arg Trp Cys Ser Cys Asn Ile Phe Ser Thr Gln Asp His Ala Ala  
 85 90 95  
 Ala Ala Ile Ala Arg Asp Ser Ala Ala Val Phe Ala Trp Lys Gly Glu  
 100 105 110  
 Thr Leu Gln Glu Tyr Trp Trp Cys Thr Glu Arg Ala Leu Asp Trp Gly  
 115 120 125  
 Pro Gly Gly Gly Pro Asp Leu Ile Val Asp Asp Gly Gly Asp Ala Thr  
 130 135 140  
 Leu Leu Ile His Glu Gly Val Lys Ala Glu Glu Ile Phe Glu Lys Thr  
 145 150 155 160  
 Gly Gln Val Pro Asp Pro Thr Ser Thr Asp Asn Pro Glu Phe Gln Ile  
 165 170 175  
 Val Leu Ser Ile Ile Lys Glu Gly Leu Gln Val Asp Pro Lys Lys Tyr  
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 His Lys Met Lys Glu Arg Leu Val Gly Val Ser Glu Glu Thr Thr Thr  
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 Gly Val Lys Arg Leu Tyr Gln Met Gln Gln Asn Gly Thr Leu Leu Phe  
 210 215 220  
 Pro Ala Ile Asn Val Asn Asp Ser Val Thr Lys Ser Lys Phe Asp Asn  
 225 230 235 240  
 Leu Tyr Gly Cys Arg His Ser Leu Pro Asp Gly Leu Met Arg Ala Thr  
 245 250 255  
 Asp Val Met Ile Ala Gly Lys Val Ala Val Ile Cys Gly Tyr Gly Asp  
 260 265 270  
 Val Gly Lys Gly Cys Ala Ala Ala Met Lys Thr Ala Gly Ala Arg Val  
 275 280 285  
 Ile Val Thr Glu Ile Asp Pro Ile Cys Ala Leu Gln Ala Leu Met Glu  
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290

295

300

Gly Leu Gln Val Leu Thr Leu Glu Asp Val Val Ser Glu Ala Asp Ile  
 305 310 315 320

Phe Val Thr Thr Thr Gly Asn Lys Asp Ile Ile Met Val Asp His Met  
 325 330 335

Arg Lys Met Lys Asn Asn Ala Ile Val Cys Asn Ile Gly His Phe Asp  
 340 345 350

Asn Glu Ile Asp Met Leu Gly Leu Glu Thr Tyr Pro Gly Val Lys Arg  
 355 360 365

Ile Thr Ile Lys Pro Gln Thr Asp Arg Trp Val Phe Pro Glu Thr Lys  
 370 375 380

Ala Gly Ile Ile Val Leu Ala Glu Gly Arg Leu Met Asn Leu Gly Cys  
 385 390 395 400

Ala Thr Gly His Pro Ser Phe Val Met Ser Cys Ser Phe Thr Asn Gln  
 405 410 415

Val Ile Ala Gln Leu Glu Leu Trp Asn Glu Lys Ala Ser Gly Lys Tyr  
 420 425 430

Glu Lys Lys Val Tyr Val Leu Pro Lys His Leu Asp Glu Lys Val Ala  
 435 440 445

Leu Leu His Leu Gly Lys Leu Gly Ala Arg Leu Thr Lys Leu Ser Lys  
 450 455 460

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Pro His Tyr Arg Tyr  
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<211> 291

<212> DNA

<213> Arabidopsis thaliana

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<211> 96

<212> PRT

<213> Arabidopsis thaliana

<400> 880

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 20 25 30

Gly Ser Ile Ala Tyr Asn Trp Ser Lys Pro Ala Met Lys Thr Ser Val  
 35 40 45

Arg Ile Ile His Ala Arg Leu His Ala Gln Ala Leu Thr Leu Ala Ala  
 50 55 60

Leu Ala Gly Ala Ala Val Glu Tyr Tyr Asp His Lys Ser Gly Ala  
 65 70 75 80

Thr Asp Arg Ile Pro Lys Phe Leu Lys Pro Asp Asn Leu Asn Lys Asp  
 85 90 95

<210> 881

<211> 1122

<212> DNA

<213> Arabidopsis thaliana

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 tccttaccga tcagacggat cgagctgtgt ttccgaggag ctatatgtgc cgccgtacaa 180

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agaaactacg aagaaacgac ctctccgtg gaagaggcag aggaagatga tgagtcatca 240
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&lt;210&gt; 882

&lt;211&gt; 373

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 882

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Met Gln Lys Val Phe Leu Ala Met Asp Thr Cys Ala Leu Val Ile His
1           5           10          15

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Gln Ser Leu Ser Arg Ile Lys Leu Ser Pro Pro Lys Ser Ser Ser Ser
20          25          30

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Ser Ser Ser Ala Phe Ser Pro Glu Ser Leu Pro Ile Arg Arg Ile Glu
35          40          45

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Leu Cys Phe Arg Gly Ala Ile Cys Ala Ala Val Gln Arg Asn Tyr Glu
50          55          60

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Glu Thr Thr Ser Ser Val Glu Glu Ala Glu Glu Asp Asp Glu Ser Ser
65          70          75          80

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Ser Ser Tyr Gly Glu Val Asn Lys Ile Ile Gly Ser Arg Thr Ala Gly  
85 90 95

Glu Gly Ala Met Glu Tyr Leu Ile Glu Trp Lys Asp Gly His Ser Pro  
100 105 110

Ser Trp Val Pro Ser Ser Tyr Ile Ala Ala Asp Val Val Ser Glu Tyr  
115 120 125

Glu Thr Pro Trp Trp Thr Ala Ala Arg Lys Ala Asp Glu Gln Ala Leu  
130 135 140

Ser Gln Leu Leu Glu Asp Arg Asp Val Asp Ala Val Asp Glu Asn Gly  
145 150 155 160

Arg Thr Ala Leu Leu Phe Val Ala Gly Leu Gly Ser Asp Lys Cys Val  
165 170 175

Arg Leu Leu Ala Glu Ala Gly Ala Asp Leu Asp His Arg Asp Met Arg  
180 185 190

Gly Gly Leu Thr Ala Leu His Met Ala Ala Gly Tyr Val Arg Pro Glu  
195 200 205

Val Val Glu Ala Leu Val Glu Leu Gly Ala Asp Ile Glu Val Glu Asp  
210 215 220

Glu Arg Gly Leu Thr Ala Leu Glu Leu Ala Arg Glu Ile Leu Lys Thr  
225 230 235 240

Thr Pro Lys Gly Asn Pro Met Gln Phe Gly Arg Arg Ile Gly Leu Glu  
245 250 255

Lys Val Ile Asn Val Leu Glu Gly Gln Val Phe Glu Tyr Ala Glu Val  
260 265 270

Asp Glu Ile Val Glu Lys Arg Gly Lys Gly Lys Asp Val Glu Tyr Leu  
275 280 285

Val Arg Trp Lys Asp Gly Gly Asp Cys Glu Trp Val Lys Gly Val His  
290 295 300

Val Ala Glu Asp Val Ala Lys Asp Tyr Glu Asp Gly Leu Glu Tyr Ala  
305 310 315 320

Val Ala Glu Ser Val Ile Gly Lys Arg Val Gly Asp Asp Gly Lys Thr  
Page 1373

Ile Glu Tyr Leu Val Lys Trp Thr Asp Met Ser Asp Ala Thr Trp Glu  
 340 345 350

Pro Gln Asp Asn Val Asp Ser Thr Leu Val Leu Leu Tyr Gln Gln Gln  
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Gln Pro Met Asn Glu  
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<211> 1125

<212> DNA

<213> Arabidopsis thaliana

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 gctatcattg aatatactct aatgatccat ctcttgaagt tacagattga cccacgtcat 720  
 cgttacggcc acaacttgca ctctatttat gatgtctggt cagcgagcaa gagcacacaa 780  
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 gaagtgatag tagaagatgg gagactaatg tataaacagg gcatgactct gatcaattca 960  
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&lt;210&gt; 884

&lt;211&gt; 374

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 884

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20 25 30Gln Asn Ser Pro Lys Ser Thr Met Glu Arg Ser Leu Ser Phe Asn Ser  
35 40 45Trp Glu Val Pro Lys Glu Thr Lys Thr Asp Ser Asp Phe Glu Val Leu  
50 55 60Glu Thr Lys Lys Ser Thr Pro Asn Thr Leu Asn Gly Arg Asn Cys Glu  
65 70 75 80Arg Ile Gln Ile Lys Lys Pro Thr Val Thr Pro Pro Glu Pro Phe Val  
85 90 95Phe Phe Ser Pro Arg Pro Val Thr Glu Leu Asp Ala Ala Ala Thr Thr  
100 105 110Leu Gln Lys Val Tyr Lys Ser Tyr Arg Thr Arg Arg Asn Leu Ala Asp  
115 120 125Cys Ala Val Val Val Glu Glu Leu Trp Trp Arg Thr Leu Glu Gly Ala  
130 135 140Ala Leu Asp Leu Ser Ser Val Ser Phe Phe Gly Glu Glu Lys His Glu  
145 150 155 160Thr Ala Val Ser Lys Trp Ala Arg Ala Arg Lys Arg Ala Ala Lys Val  
165 170 175Gly Lys Gly Leu Ser Lys Asp Glu Lys Ala Gln Lys Leu Ala Leu Gln  
180 185 190His Trp Leu Glu Ala Val Ser Pro His Asn Leu Asn Ile Phe Val Thr  
Page 1375

Ser Tyr Gln Arg Gln Val Pro Tyr Leu Thr Ser Lys Ala Ile Ile Glu  
210 215 220

Tyr Thr Leu Met Ile His Leu Leu Lys Leu Gln Ile Asp Pro Arg His  
225 230 235 240

Arg Tyr Gly His Asn Leu His Phe Tyr Tyr Asp Val Trp Ser Ala Ser  
245 250 255

Lys Ser Thr Gln Pro Phe Phe Tyr Trp Leu Asp Ile Gly Asp Gly Lys  
260 265 270

Asp Val Asn Leu Glu Lys His Pro Arg Ser Val Leu Gln Lys Gln Cys  
275 280 285

Ile Arg Tyr Leu Gly Pro Met Glu Arg Glu Ala Tyr Glu Val Ile Val  
290 295 300

Glu Asp Gly Arg Leu Met Tyr Lys Gln Gly Met Thr Leu Ile Asn Ser  
305 310 315 320

Thr Glu Glu Ala Lys Ser Ile Phe Val Leu Ser Thr Thr Arg Asn Leu  
325 330 335

Tyr Val Gly Ile Lys Lys Lys Gly Leu Phe Gln His Ser Ser Phe Leu  
340 345 350

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355 360 365

Ile Leu Glu Val Leu Glu  
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<211> 564

<212> DNA

<213> Arabidopsis thaliana

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 gctttgacta gcttggcgtt gaaggaagct aaggagctaa tcgaaggatt accaaagaag 480  
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<210> 886

<211> 187

<212> PRT

<213> Arabidopsis thaliana

<400> 886

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Ile Glu Phe Pro Phe Arg Leu Ser Ser Ser Ser His Arg Ala Ile  
35 40 45

Asn Leu Arg Pro Ile Ser Ala Val Glu Ala Pro Glu Lys Ile Glu Lys  
50 55 60

Ile Gly Ser Glu Ile Ser Ser Leu Thr Leu Glu Glu Ala Arg Ile Leu  
65 70 75 80

Val Asp Tyr Leu Gln Asp Lys Phe Gly Val Ser Pro Leu Ser Leu Ala  
85 90 95

Pro Ala Ala Ala Val Ala Ala Pro Ala Asp Gly Gly Ala Ala Ala  
100 105 110

Val Val Glu Glu Gln Thr Glu Phe Asp Val Val Ile Asn Glu Val Pro  
115 120 125

Ser Ser Ser Arg Ile Ala Val Ile Lys Ala Val Arg Ala Leu Thr Ser  
130 135 140

047-E2F-PCT.ST25.txt

Leu Ala Leu Lys Glu Ala Lys Glu Leu Ile Glu Gly Leu Pro Lys Lys  
145 150 155 160

Phe Lys Glu Gly Ile Thr Lys Asp Glu Ala Glu Glu Ala Lys Lys Thr  
165 170 175

Leu Glu Glu Ala Gly Ala Lys Val Ser Ile Ala  
180 185

<210> 887

<211> 1200

<212> DNA

<213> Arabidopsis thaliana

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ggagctaaaa aggaattcaa caaaaccgag gatgatctca agtctcttca aagtgttggg 180  
cagattattg gagaagtgcg tcgacccctg gataatgaaa gattgattgt gaaagcgagc 240  
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&lt;210&gt; 888

&lt;211&gt; 399

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 888

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20 25 30Arg Thr Ala Arg Glu Asn Leu Arg Gly Ala Lys Lys Glu Phe Asn Lys  
35 40 45Thr Glu Asp Asp Leu Lys Ser Leu Gln Ser Val Gly Gln Ile Ile Gly  
50 55 60Glu Val Leu Arg Pro Leu Asp Asn Glu Arg Leu Ile Val Lys Ala Ser  
65 70 75 80Ser Gly Pro Arg Tyr Val Val Gly Cys Arg Ser Lys Val Asp Lys Glu  
85 90 95Lys Leu Thr Ser Gly Thr Arg Val Val Leu Asp Met Thr Thr Leu Thr  
100 105 110Ile Met Arg Ala Leu Pro Arg Glu Val Asp Pro Val Val Tyr Asn Met  
115 120 125Leu His Glu Asp Pro Gly Asn Ile Ser Tyr Ser Ala Val Gly Gly Leu  
130 135 140Gly Asp Gln Ile Arg Glu Leu Arg Glu Ser Ile Glu Leu Pro Leu Met  
145 150 155 160Asn Pro Glu Leu Phe Leu Arg Val Gly Ile Lys Pro Pro Lys Gly Val  
165 170 175Leu Leu Tyr Gly Pro Pro Gly Thr Gly Lys Thr Leu Leu Ala Arg Ala  
180 185 190Ile Ala Ser Asn Ile Asp Ala Asn Phe Leu Lys Val Val Ser Ser Ala  
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Ile Ile Asp Lys Tyr Ile Gly Glu Ser Ala Arg Leu Ile Arg Glu Met  
210 215

Phe Asn Tyr Ala Arg Glu His Gln Pro Cys Ile Ile Phe Met Asp Glu  
225 230 235 240

Ile Asp Ala Ile Gly Arg Arg Phe Ser Glu Gly Thr Ser Ala Asp  
245 250 255

Arg Glu Ile Gln Arg Thr Leu Met Glu Leu Leu Asn Gln Leu Asp Gly  
260 265 270

Phe Asp Asn Leu Gly Lys Val Lys Met Ile Met Ala Thr Asn Arg Pro  
275 280 285

Asp Val Leu Asp Pro Ala Leu Leu Arg Pro Gly Arg Leu Asp Arg Lys  
290 295 300

Ile Glu Ile Pro Leu Pro Asn Glu Gln Ser Arg Met Asp Ile Leu Lys  
305 310 315 320

Ile His Ala Ala Gly Ile Ala Lys His Gly Glu Ile Asp Tyr Glu Ala  
325 330 335

Ile Val Lys Leu Ala Glu Gly Phe Asn Gly Ala Asp Leu Arg Asn Ile  
340 345 350

Cys Thr Glu Ala Gly Met Phe Ala Ile Arg Ala Glu Arg Asp Tyr Val  
355 360 365

Ile His Glu Asp Phe Met Lys Ala Val Arg Lys Leu Ser Glu Ala Lys  
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Lys Leu Glu Ser Ser Ser His Tyr Asn Ala Asp Phe Gly Lys Glu  
385 390 395

<210> 889

<211> 1086

<212> DNA

<213> Arabidopsis thaliana

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tacgtgaggc	atccgatggc	tacctccacg	ctcctctact	cccatggcaa	gcgcccgat	240
ctgggacaga	tgtatgagct	cttcattgag	cttagcatcc	atctcaagg	taatcttatg	300
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aaagagaagc	caccaaaagag	tcagtcgaag	atgagtagca	gcagcagcaa	gctcaagatc	960
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agcgttgacc	agattgagag	ggggaggaag	agtgtggata	ggttggatag	agttcgctcc	1080
gagtaa						1086

<210> 890

<211> 361

<212> PRT

<213> Arabidopsis thaliana

<400> 890

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		20						25					30		

Leu	Leu	Leu	Ser	Pro	Phe	Pro	His	Arg	Glu	Asn	Val	Glu	Ile	Val	Lys
		35					40					45			

Leu	Arg	Thr	Arg	Arg	Gly	Thr	Glu	Ile	Val	Gly	Met	Tyr	Val	Arg	His

50

55

60

Pro Met Ala Thr Ser Thr Leu Leu Tyr Ser His Gly Asn Ala Ala Asp  
65 70 75 80

Leu Gly Gln Met Tyr Glu Leu Phe Ile Glu Leu Ser Ile His Leu Lys  
85 90 95

Val Asn Leu Met Gly Tyr Asp Tyr Ser Gly Tyr Gly Gln Ser Thr Gly  
100 105 110

Lys Pro Ser Glu His Asn Thr Tyr Ala Asp Ile Glu Ala Val Tyr Lys  
115 120 125

Cys Leu Glu Glu Thr Phe Gly Ser Lys Gln Glu Gly Val Ile Leu Tyr  
130 135 140

Gly Gln Ser Val Gly Ser Gly Pro Thr Leu Asp Leu Ala Ser Arg Leu  
145 150 155 160

Pro Gln Leu Arg Ala Val Val Leu His Ser Pro Ile Leu Ser Gly Leu  
165 170 175

Arg Val Met Tyr Ser Val Lys Lys Thr Tyr Trp Phe Asp Ile Tyr Lys  
180 185 190

Asn Ile Asp Lys Ile Pro Tyr Val Asp Cys Pro Val Leu Ile Ile His  
195 200 205

Gly Thr Ser Asp Glu Val Val Asp Cys Ser His Gly Lys Gln Leu Trp  
210 215 220

Glu Leu Cys Lys Asp Lys Tyr Glu Pro Leu Trp Val Lys Gly Gly Asn  
225 230 235 240

His Cys Asp Leu Glu His Tyr Pro Glu Tyr Ile Arg His Leu Lys Lys  
245 250 255

Phe Ile Ala Thr Val Glu Arg Leu Pro Cys Pro Arg Met Ser Ser Asp  
260 265 270

Gln Ser Glu Arg Val Arg Asp Ala Pro Pro Arg Arg Ser Met Asp Arg  
275 280 285

Arg Val Lys Pro Arg Gln Ser Thr Glu Arg Arg Glu Lys Glu Lys Pro  
290 295 300

Pro Lys Ser Gln Ser Lys Met Ser Ser Ser Ser Ser Lys Leu Lys Ile  
 305 310 315 320

Ser Phe Asp Gln Leu Asp Arg Ser Arg Arg Ser Val Asp Cys His Glu  
 325 330 335

Lys Thr Arg Lys Ser Val Asp Gln Ile Glu Arg Gly Arg Lys Ser Val  
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Asp Arg Leu Asp Arg Val Arg Ser Glu  
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<211> 1899

<212> DNA

<213> Arabidopsis thaliana

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 gaactccaaa agaagattcg tttagtgca ggggaacgga agagagtgcc ggagtttgtg 900  
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&lt;210&gt; 892

&lt;211&gt; 632

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 892

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1           5           10          15

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Lys Tyr Leu Leu Tyr Ala Pro Leu Ala Ala Gln Val Val Tyr Ser Trp
          20          25          30

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Val Tyr Glu Glu Asp Ile Ser Lys Val Leu Trp Cys Ile His Ile Leu
          35          40          45

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Ile Ile Cys Gly Leu Lys Ala Leu Val His Glu Leu Trp Ser Val Phe
          50          55          60

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Asn Asn Met Leu Phe Val Thr Arg Thr Leu Arg Ile Asn Pro Lys Gly
65          70          75          80

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Ile Asp Phe Lys Gln Ile Asp His Glu Trp His Trp Asp Asn Tyr Ile
          85          90          95

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Ile Leu Gln Ala Ile Ile Val Ser Leu Ile Cys Tyr Met Ser Pro Pro  
100 105 110

Leu Met Met Met Ile Asn Ser Leu Pro Leu Trp Asn Thr Lys Gly Leu  
115 120 125

Ile Ala Leu Ile Val Leu His Val Thr Phe Ser Glu Pro Leu Tyr Tyr  
130 135 140

Phe Leu His Arg Ser Phe His Arg Asn Asn Tyr Phe Phe Thr His Tyr  
145 150 155 160

His Ser Phe His His Ser Ser Pro Val Pro His Pro Met Thr Ala Gly  
165 170 175

Asn Ala Thr Leu Leu Glu Asn Ile Ile Leu Cys Val Val Ala Gly Val  
180 185 190

Pro Leu Ile Gly Cys Cys Leu Phe Gly Val Gly Ser Leu Ser Ala Ile  
195 200 205

Tyr Gly Tyr Ala Val Met Phe Asp Phe Met Arg Cys Leu Gly His Cys  
210 215 220

Asn Val Glu Ile Phe Ser His Lys Leu Phe Glu Ile Leu Pro Val Leu  
225 230 235 240

Arg Tyr Leu Ile Tyr Thr Pro Thr Tyr His Ser Leu His His Gln Glu  
245 250 255

Met Gly Thr Asn Phe Cys Leu Phe Met Pro Leu Phe Asp Val Leu Gly  
260 265 270

Asp Thr Gln Asn Pro Asn Ser Trp Glu Leu Gln Lys Lys Ile Arg Leu  
275 280 285

Ser Ala Gly Glu Arg Lys Arg Val Pro Glu Phe Val Phe Leu Ala His  
290 295 300

Gly Val Asp Val Met Ser Ala Met His Ala Pro Phe Val Phe Arg Ser  
305 310 315 320

Phe Ala Ser Met Pro Tyr Thr Thr Arg Ile Phe Leu Leu Pro Met Trp  
325 330 335

Pro Phe Thr Phe Cys Val Met Leu Gly Met Trp Ala Trp Ser Lys Thr  
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Phe Leu Phe Ser Phe Tyr Thr Leu Arg Asn Asn Leu Cys Gln Thr Trp  
 355 360 365  
 Gly Val Pro Arg Phe Gly Phe Gln Tyr Phe Leu Pro Phe Ala Thr Lys  
 370 375  
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 385 390 395 400  
 Gly Val Lys Val Ile Ser Leu Ala Ala Leu Asn Lys Asn Glu Ala Lys  
 405 410 415  
 Asn Gly Gly Gly Thr Leu Phe Val Asn Lys His Pro Asp Leu Arg Val  
 420 425 430  
 Arg Val Val His Gly Asn Thr Leu Thr Ala Ala Val Ile Leu Tyr Glu  
 435 440 445  
 Ile Pro Lys Asp Val Asn Glu Val Phe Leu Thr Gly Ala Thr Ser Lys  
 450 455 460  
 Leu Gly Arg Ala Ile Ala Leu Tyr Leu Cys Arg Arg Gly Val Arg Val  
 465 470 475 480  
 Leu Met Leu Thr Leu Ser Met Glu Arg Phe Gln Lys Ile Gln Lys Glu  
 485 490 495  
 Ala Pro Val Glu Phe Gln Asn Asn Leu Val Gln Val Thr Lys Tyr Asn  
 500 505 510  
 Ala Ala Gln His Cys Lys Thr Trp Ile Val Gly Lys Trp Leu Thr Pro  
 515 520 525  
 Arg Glu Gln Ser Trp Ala Pro Ala Gly Thr His Phe His Gln Phe Val  
 530 535 540  
 Val Pro Pro Ile Leu Lys Phe Arg Arg Asn Cys Thr Tyr Gly Asp Leu  
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 Ala Ala Met Lys Leu Pro Lys Asp Val Glu Gly Leu Gly Thr Cys Glu  
 565 570 575  
 Tyr Thr Met Glu Arg Gly Val Val His Ala Cys His Ala Gly Gly Val  
 580 585 590



Val His Met Leu Glu Gly Trp Lys His His Glu Val Gly Ala Ile Asp  
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Val Asp Arg Ile Asp Leu Val Trp Glu Ala Ala Met Lys Tyr Gly Leu  
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Ser Ala Val Ser Ser Leu Thr Asn  
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<211> 732

<212> DNA

<213> Arabidopsis thaliana

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<213> Arabidopsis thaliana

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Gln Ser Asn Lys Glu Gly Ser Val Asp Leu Lys Asn Val Ser Ala Val  
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Pro Lys Glu Lys Thr Thr Leu Lys Asp Pro Ser Lys Pro Pro Ala Lys  
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145 150 155 160  
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Trp Glu Met Phe Val Glu Ser Cys Lys Arg Leu Arg Ile Met Lys Gly  
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&lt;211&gt; 453

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<213> *Arabidopsis thaliana*

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&lt;210&gt; 896

&lt;211&gt; 150

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 896

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Lys Lys Pro Lys	Ala Gly Lys Lys	Leu Pro Lys Glu	Ala Gly Ala Gly
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Gly Asp Lys Lys	Lys Lys Met Lys Lys Lys	Ser Val Glu Thr Tyr Lys	
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Ile Tyr Ile Phe	Lys Val Leu Lys Gln Val	His Pro Asp Ile Gly Ile	
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Glu Lys Leu Ala Gln Glu Ala Ser Lys Leu Ala Arg Tyr Asn Lys Lys  
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Pro Thr Ile Thr Ser Arg Glu Ile Gln Thr Ala Val Arg Leu Val Leu  
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Thr Lys Phe Thr Ser Ser  
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<213> Arabidopsis thaliana

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<212> PRT

<213> Arabidopsis thaliana

<400> 898

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Tyr Glu Arg Pro Ser Ala Pro Pro Pro His Ser Ala Thr Thr Pro Lys  
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Leu Ala Gln Ile Pro Val Pro Ser Ser Gly Gln Gly His Gln Ala Gln  
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His Glu Gln Ala Lys Pro Val Gly His Val Ser Gln Gln His Gly Phe  
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Gln Gln Gln Pro Gln Gln Phe Pro Ser Gln His Val Arg Pro Gln Met  
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Met Gln Gln His Pro Ala Gln Gln Met Pro Gln Gln Ser Gly Gln Gln  
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Phe Pro Gln Gln Gln Ser Gln Ser Met Val Pro His Pro His Gly His  
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Pro Ser Val Gln Thr Tyr Gln Pro Thr Thr Gln Gln Gln Gln Gly  
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Met Gln Asn Gln His Ser Gln Met Pro Gln Gln Leu Ser His Gln Tyr  
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Ala His Ser Gln Gln His Tyr Met Gly Phe Arg Pro His Met Gln Thr  
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Gln Gln Phe Pro Ser Gln Gln Glu Tyr Asn Ser Leu Ala Pro Lys Arg  
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Glu Gly Asp Glu Phe His Gly Gly Lys Lys Thr Gly Phe Ser Gln Pro  
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His Leu Pro Asn Ser Glu Arg Ser Pro Ser Gln Asn Thr His Phe Glu  
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Ala Asn Ala Ala Ser Gln Lys Thr Asn Ala Asn Leu Ala Met Ala Gln  
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Lys Cys Asn Gly Pro Gln Ala Asn Ala Ala Val Thr Gln Phe Gln Gln  
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Pro Gly Ala Asn Leu Ile His Gln Gln Leu Gly Pro Arg Ala Pro Asn  
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Gln Met Asp Gln Thr Met Leu His Gln Lys Ser His Val Ser Pro Phe  
305 310 315 320

Gln Ser Asn Asn Thr Tyr Glu Asn Asn Leu Gln Ser Arg Pro Gly Asn  
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Asp Ser Tyr Val Asn Met Arg Met Glu Val Pro Val Arg Gly Ala Gln  
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Tyr Gly His Ala Gly Pro Ala Phe Pro Asn Lys Ser Leu Val Arg Pro  
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His Phe Val Thr Ser Pro Asp Val Pro His Leu Ser Pro Val Glu Ile

Tyr Arg Lys Gln His Glu Val Thr Thr Thr Gly Glu Asn Ile Pro Ala  
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Pro Tyr Ile Thr Phe Glu Ser Ser Gly Leu Pro Pro Glu Ile Leu Arg  
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Thr Gly Ser Gly Lys Thr Leu Gly Tyr Leu Ile Pro Ala Phe Ile Leu  
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Leu Arg His Cys Arg Asn Asp Ser Arg Asn Gly Pro Thr Val Leu Ile  
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Arg Phe Gly Arg Ser Ser Arg Ile Ser Cys Thr Cys Leu Tyr Gly Gly  
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Val Val Ala Thr Pro Gly Arg Leu Asn Asp Ile Leu Glu Met Lys Met  
565 570 575

Ile Asp Phe Gln Gln Val Ser Leu Leu Val Leu Asp Glu Ala Asp Arg  
580 585 590

Met Leu Asp Met Gly Phe Glu Pro Gln Ile Arg Lys Ile Val Asn Glu  
595 600 605

Ile Pro Pro Arg Arg Gln Thr Leu Met Tyr Thr Ala Thr Trp Pro Lys  
610 615 620

Glu Val Arg Lys Ile Ala Ser Asp Leu Leu Val Asn Pro Val Gln Val  
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Asn Ile Gly Arg Val Asp Glu Leu Ala Ala Asn Lys Ala Ile Thr Gln  
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Tyr Val Glu Val Val Pro Gln Met Glu Lys Glu Arg Arg Leu Glu Gln  
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Ile Leu Arg Ser Gln Glu Arg Gly Ser Lys Val Ile Ile Phe Cys Ser  
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Thr Lys Arg Leu Cys Asp His Leu Ala Arg Ser Val Gly Arg His Phe  
690 695 700

Gly Ala Val Val Ile His Gly Asp Lys Thr Gln Gly Glu Arg Asp Trp  
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Val Leu Asn Gln Phe Arg Ser Gly Lys Ser Cys Val Leu Ile Ala Thr  
725 730 735

Asp Val Ala Ala Arg Gly Leu Asp Ile Lys Asp Ile Arg Val Val Ile  
740 745 750

Asn Tyr Asp Phe Pro Thr Gly Val Glu Asp Tyr Val His Arg Ile Gly  
755 760 765

Arg Thr Gly Arg Ala Gly Ala Thr Gly Val Ala Phe Thr Phe Phe Thr  
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785 790 795 800

Ala Asn Gln Gln Val Pro Pro Gln Val Arg Asp Ile Ala Met Arg Gly  
805 810 815

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835 840 845

Gly Phe Gly Gly Arg Gly Gly Gly Phe Ser Gly Arg Glu Gly Gly Phe  
850 855 860

Gly Gly Arg Glu Gly Gly Phe Gly Gly Arg Glu Gly Gly Phe Gly Gly  
865 870 875 880

Arg Gly Gly Arg Phe Gly Met Arg Asp Asp Ser Phe Gly Arg Gly Gly  
885 890 895

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900 905 910

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Ser Arg Gly Phe Gly Arg Gly Ser Gly Arg Gly Phe Gly Arg Gly Val  
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Gly Arg Phe Asp Asn Arg Arg Gly Arg Ser Arg Ser Arg Ser Pro Asp  
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Leu Val Arg Pro Arg Arg Arg Ser Ser Ser Tyr Ser Arg Ser Arg Ser  
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Arg Ser Gly Ser Tyr Ser Arg Ser Arg Ser Arg Ser Arg Ser Trp Ser  
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995 1000 1005

Asn Arg Ser Arg Ser Tyr Ser Arg Ser Pro Ser Pro Val Tyr Glu  
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Arg Arg Asp Arg Ala Pro Arg Val Ser Gly Phe Asp Ile Lys Pro  
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Pro Val Glu Ser Val Val Asn Leu Asp Met Asn Ala Ala Ala Ala  
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Ile Glu Asn Val Val Pro Thr Ser Leu Ser Glu Arg Gln Gly Asn  
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125

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Gly Phe Pro Asp Ala Ala Met Tyr Gly Ala Ala Ala Ser Gly Gly Phe  
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Pro His Gly Phe Ser Asn Pro Phe His Gly Gly His Ser His Met His  
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Ser Tyr Gln Arg His Thr Gly Arg Gln Gly Gln Gln Asp His His Leu  
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&lt;211&gt; 228

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

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Phe Pro Gly Ile Ser Ser Pro Leu Cys Val Ser Ser Cys Leu Cys Ser  
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35 40 45

Thr Glu Ala Ser Thr Val Tyr Gly Met Ser Ala Phe Gly Leu Leu Leu  
50 55 60

Val Ser Gln Ala Val Val Asn Gly Val Thr Lys Cys Leu Cys Phe Gly  
65 70 75 80

Lys Gly Leu Val Thr Gly Thr Ser Tyr Thr Val Trp Ala Ile Val Phe  
85 90 95

Phe Val Val Ser Trp Val Ser Phe Leu Gly Ala Glu Ala Cys Leu Leu  
100 105 110

Gly Gly Ser Ala Arg Asn Ala Tyr His Thr Lys Ser Glu Gly Ile Tyr  
115 120 125

Lys Gly Lys Glu Leu Ser Cys Ala Val Leu Pro Val Gly Val Phe Ala  
130 135 140

Ala Gly Ala Ala Phe Thr Leu Met Ser Leu Ile Ala Thr Ile Leu Tyr  
145 150 155 160

Tyr Leu Ala His Ser Lys Ala Asp Thr Gly Gly Trp Glu Lys His Gln  
165 170 175

Asn Asp Gly Ile Asn Ile Gly Met Thr Thr Pro Ser Asp Ala Pro Lys  
180 185 190

Gln Gln Asn Thr Glu Phe Asn Lys Val  
195 200

&lt;210&gt; 905

&lt;211&gt; 1263

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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aacgcttctt caacgattac tacgacgtcg gataagactg atagtcaagg ggagactact    300
aagggtagtt cggggaaaag tgaagaagtc gtaagcaaaa gagacgatgt tgcggcggag    360
acggtgactt atgacggtag cagtgaccgg aaaaggaagt attcctcttc agcttcttcc    420
aagaacaatc ggatcagtaa caacgaaggg aagagaaaag tgaagggtga ttggacacca    480
gagctacaca ggagattcgt ggaggcagtg gaacagttag gagtggacaa agctgttctc    540
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gttgaccgcg cacctgtcca ccaccatcat ttagggcccc tgcattgtgt gggacatccc    840
acgggtgatc agtccattat gccgcagtgt tggcccaaac acttacctcc gccttctacc    900
gccatgccta atccgccgtt ttgggtctcc gatttctcct attggcatcc aatgcataac    960
gggacgactc cgtatttacc gaccgtagct acgagattta gagcaccgcc agttgccgga   1020
atcccgcatg ctctgccgcc gcatcacacg atgtacaac caaatcttgg atttggtggt   1080
gtctgtcctc cggtagactt acatccgtca aaagagagcg tggatgcagc cataggagat   1140
gtattgacga ggccatggct gccacttccg ttgggattaa atccgccggc tgttgacggt   1200
gttatgacag agcttcaccg tcacgggtgc tctgaggttc ctccgaccgc gtcttgtgcc   1260
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<210> 906

<211> 420

<212> PR1

<213> Arabidopsis thaliana

<400> 906

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047-E2F-PCT.ST25.txt

Glu Phe Leu Asp Thr Ser Cys Gly Phe Thr Ile Ile Asn Pro Glu Glu  
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 Glu Glu Glu Phe Pro Asp Phe Ala Asp His Gly Asp Leu Leu Asp Ile  
 35 40 45  
 Ile Asp Phe Asp Asp Ile Phe Gly Val Ala Gly Asp Val Leu Pro Asp  
 50 55 60  
 Leu Glu Ile Asp Pro Glu Ile Leu Ser Gly Asp Phe Ser Asn His Met  
 65 70 75 80  
 Asn Ala Ser Ser Thr Ile Thr Thr Thr Ser Asp Lys Thr Asp Ser Gln  
 85 90 95  
 Gly Glu Thr Thr Lys Gly Ser Ser Gly Lys Gly Glu Glu Val Val Ser  
 100 105 110  
 Lys Arg Asp Asp Val Ala Ala Glu Thr Val Thr Tyr Asp Gly Asp Ser  
 115 120 125  
 Asp Arg Lys Arg Lys Tyr Ser Ser Ser Ala Ser Ser Lys Asn Asn Arg  
 130 135 140  
 Ile Ser Asn Asn Glu Gly Lys Arg Lys Val Lys Val Asp Trp Thr Pro  
 145 150 155 160  
 Glu Leu His Arg Arg Phe Val Glu Ala Val Glu Gln Leu Gly Val Asp  
 165 170 175  
 Lys Ala Val Pro Ser Arg Ile Leu Glu Leu Met Gly Val His Cys Leu  
 180 185 190  
 Thr Arg His Asn Val Ala Ser His Leu Gln Lys Tyr Arg Ser His Arg  
 195 200 205  
 Lys His Leu Leu Ala Arg Glu Ala Glu Ala Ala Asn Trp Thr Arg Lys  
 210 215 220  
 Arg His Ile Tyr Gly Val Asp Thr Gly Ala Asn Leu Asn Gly Arg Thr  
 225 230 235 240  
 Lys Asn Gly Trp Leu Ala Pro Ala Pro Thr Leu Gly Phe Pro Pro Pro  
 245 250 255  
 Pro Pro Val Ala Val Ala Pro Pro Pro Val His His His His Phe Arg  
 260 265 270



Pro Leu His Val Trp Gly His Pro Thr Val Asp Gln Ser Ile Met Pro  
275 280 285

His Val Trp Pro Lys His Leu Pro Pro Pro Ser Thr Ala Met Pro Asn  
290 295 300

Pro Pro Phe Trp Val Ser Asp Ser Pro Tyr Trp His Pro Met His Asn  
305 310 315 320

Gly Thr Thr Pro Tyr Leu Pro Thr Val Ala Thr Arg Phe Arg Ala Pro  
325 330 335

Pro Val Ala Gly Ile Pro His Ala Leu Pro Pro His His Thr Met Tyr  
340 345 350

Lys Pro Asn Leu Gly Phe Gly Gly Ala Arg Pro Pro Val Asp Leu His  
355 360 365

Pro Ser Lys Glu Ser Val Asp Ala Ala Ile Gly Asp Val Leu Thr Arg  
370 375 380

Pro Trp Leu Pro Leu Pro Leu Gly Leu Asn Pro Pro Ala Val Asp Gly  
385 390 395 400

Val Met Thr Glu Leu His Arg His Gly Val Ser Glu Val Pro Thr  
405 410 415

Ala Ser Cys Ala  
420

<210> 907

<211> 1020

<212> DNA

<213> Arabidopsis thaliana

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gactgccgc acatgctctt ctatggacca ccaggcactg gaaaaccac tactgtcttt 180  
gccatgctc accagctctt tggacctgaa ctatacaagt ctagggtggtt ggagcttaat 240  
gcaagtgatg acagaggtat taatgttggtt cggactaaga tcaaggattt tgctgctggt 300

gctgttgggt ctaatcatcg tcaaagtggt tacccttgcc catcgtttaa gatcatcatc 360  
 ctagatgagg ctgattcgat gacagaagat gctcagaatg ccttgaggcg cacaatggaa 420  
 acttactcca aagtcaccag attctttttc atatgtaatt acatcagcag gatcatagag 480  
 ccccttgctt ccagggtgtgc gaagttcagg tttaaaccac tttccgaaga agtcatgagt 540  
 aaccgtatat tgcataattg taatgaagaa ggtctcagcc ttgatggaga ggctctttca 600  
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 actcggttgt ttggatcaac aataacttct acagatttac tcaatgtgtc tggggtagtt 720  
 cctctagagg tagtcaataa actttttact gcatgcaaaa gtggtgattt cgaatttgca 780  
 aacaaggaag tggataacat agttgcagaa ggatactctg catctcaaat catcaatcag 840  
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 tgcaaatgtt tagctgaaac tgataagcga cttgtagacg gggcggatga gtacttgacg 960  
 cttctggatg tggcaagcag tacaatttgt gccctctcag aaatgggtca agacttctaa 1020

<210> 908

<211> 339

<212> PRT

<213> *Arabidopsis thaliana*

<400> 908

Met Ala Pro Val Leu Gln Ser Ser Gln Pro Trp Val Glu Lys Tyr Arg  
1 5 10 15

Pro Lys Gln Val Lys Asp Val Ala His Gln Glu Glu Val Val Arg Val  
20 25 30

Leu Thr Asn Thr Leu Gln Thr Ala Asp Cys Pro His Met Leu Phe Tyr  
35 40 45

Gly Pro Pro Gly Thr Gly Lys Thr Thr Thr Ala Leu Ala Ile Ala His  
50 55 60

Gln Leu Phe Gly Pro Glu Leu Tyr Lys Ser Arg Val Leu Glu Leu Asn  
65 70 75 80

Ala Ser Asp Asp Arg Gly Ile Asn Val Val Arg Thr Lys Ile Lys Asp  
85 90 95

Phe Ala Ala Val Ala Val Gly Ser Asn His Arg Gln Ser Gly Tyr Pro  
100 105 110

047-E2F-PCT.ST25.txt

Cys Pro Ser Phe Lys Ile Ile Ile Leu Asp Glu Ala Asp Ser Met Thr  
 115 120 125  
 Glu Asp Ala Gln Asn Ala Leu Arg Arg Thr Met Glu Thr Tyr Ser Lys  
 130 135 140  
 Val Thr Arg Phe Phe Phe Ile Cys Asn Tyr Ile Ser Arg Ile Ile Glu  
 145 150 155 160  
 Pro Leu Ala Ser Arg Cys Ala Lys Phe Arg Phe Lys Pro Leu Ser Glu  
 165 170 175  
 Glu Val Met Ser Asn Arg Ile Leu His Ile Cys Asn Glu Glu Gly Leu  
 180 185 190  
 Ser Leu Asp Gly Glu Ala Leu Ser Thr Leu Ser Ser Ile Ser Gln Gly  
 195 200 205  
 Asp Leu Arg Arg Ala Ile Thr Tyr Leu Gln Ser Ala Thr Arg Leu Phe  
 210 215 220  
 Gly Ser Thr Ile Thr Ser Thr Asp Leu Leu Asn Val Ser Gly Val Val  
 225 230 235 240  
 Pro Leu Glu Val Val Asn Lys Leu Phe Thr Ala Cys Lys Ser Gly Asp  
 245 250 255  
 Phe Asp Ile Ala Asn Lys Glu Val Asp Asn Ile Val Ala Glu Gly Tyr  
 260 265 270  
 Pro Ala Ser Gln Ile Ile Asn Gln Leu Phe Asp Ile Val Ala Glu Ala  
 275 280 285  
 Asp Ser Asp Ile Thr Asp Met Gln Lys Ala Lys Ile Cys Lys Cys Leu  
 290 295 300  
 Ala Glu Thr Asp Lys Arg Leu Val Asp Gly Ala Asp Glu Tyr Leu Gln  
 305 310 315 320  
 Leu Leu Asp Val Ala Ser Ser Thr Ile Cys Ala Leu Ser Glu Met Ala  
 325 330 335  
 Gln Asp Phe

&lt;211&gt; 852

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 909

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accatctcgc cgacgcttct cctctcgaac atgtaccaga gacctgacat gataactcca      180
gggtgtggatc ctgagggaca gccgttagac ccgagtaaga tccaagacca ctttggaggat      240
ttctacgaag atattttcga agaactcaac aagtttggtg aagtgagag tctcaatgtt      300
tgtgacaatc ttgctgatca tatgattggg aatgtgtatg ttctgtttaa ggaggaggat      360
cacgcagctg ctgcgttgca ggctttgcag gggagatttt attccggtcg tcctatcatt      420
gctgatttct ctccgttgac ggattttagg gaagctactt gtaggcagta tgaagaaaac      480
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cgggagtgtg gtggaaggag gagacatgga agcccgaac ggagcagaag cccacgaaat      780
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gagggagttt aa                                                    852

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&lt;210&gt; 910

&lt;211&gt; 283

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 910

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Met Ala Glu His  Leu Ala Ser Ile Phe Gly Thr Glu Lys Asp Arg Val
1              5              10              15

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Asn Cys Pro Phe Tyr Phe Lys Ile Gly Ala Cys Arg His Gly Asp Arg
20              25              30

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Cys Ser Arg Leu His Asn Arg Pro Thr Ile Ser Pro Thr Leu Leu Leu
35              40              45

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047-E2F-PCT.ST25.txt

Ser Asn Met Tyr Gln Arg Pro Asp Met Ile Thr Pro Gly Val Asp Pro  
50 55 60

Gln Gly Gln Pro Leu Asp Pro Ser Lys Ile Gln Asp His Phe Glu Asp  
65 70 75 80

Phe Tyr Glu Asp Ile Phe Glu Glu Leu Asn Lys Phe Gly Glu Val Glu  
85 90 95

Ser Leu Asn Val Cys Asp Asn Leu Ala Asp His Met Ile Gly Asn Val  
100 105 110

Tyr Val Leu Phe Lys Glu Glu Asp His Ala Ala Ala Ala Leu Gln Ala  
115 120 125

Leu Gln Gly Arg Phe Tyr Ser Gly Arg Pro Ile Ile Ala Asp Phe Ser  
130 135 140

Pro Val Thr Asp Phe Arg Glu Ala Thr Cys Arg Gln Tyr Glu Glu Asn  
145 150 155 160

Ser Cys Asn Arg Gly Gly Tyr Cys Asn Phe Met His Val Lys Gln Ile  
165 170 175

Ser Arg Glu Leu Arg Arg Lys Leu Phe Gly Arg Tyr Arg Arg Ser Tyr  
180 185 190

Arg Arg Gly Ser Arg Ser Arg Ser Arg Ser Ile Ser Pro Arg Arg Lys  
195 200 205

Arg Glu His Ser Arg Glu Arg Glu Arg Gly Asp Val Arg Asp Arg Asp  
210 215 220

Arg His Gly Asn Gly Lys Arg Ser Ser Asp Arg Ser Glu Arg His Asp  
225 230 235 240

Arg Asp Gly Gly Gly Arg Arg Arg His Gly Ser Pro Lys Arg Ser Arg  
245 250 255

Ser Pro Arg Asn Val Arg Glu Gly Ser Glu Glu Arg Arg Ala Arg Ile  
260 265 270

Glu Gln Trp Asn Arg Glu Arg Asp Glu Gly Val  
275 280

<210> 911

&lt;211&gt; 1065

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 911

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gggccgtcag gttctggtaa gaaaacccta attatggctc ttctcaagca gatatatggg    180
gccagtgcag agaaggtgaa agtggagaac agggcatgga aagttgatgc tgggagtaga    240
actattgatac tggagctcac tacattatca agcaccaatc atgtggaact tactccaagt    300
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tgccgtctca tcttatgctg caacagctct tcgaagggtt ccgaagccat taagtctcgt    540
tgtctcaatg tgcgcataaa tgcaccttcg caggaagaga tagtgaaagt gttggagttc    600
gttgcaaaag aagaaagtct gcaactgccc cagggttttg ctgctcgtat tgcgtaaaaa    660
tcaaattcgca gtctaagaag agctattttg tcacttgaaa ctgtcgtgt ccaaaaactat    720
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tacgaattac tagttaattg tattccacca gaagtcattc taaagagact cttcatgaa    900
ttgctgaaga aactggactc agagctaaag cttgaagtct gccactgggc tgcataattat    960
gaacatcgga tgcgattagg tcagaaagcc atatttcaca tagaagcatt tgtggccaag    1020
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&lt;210&gt; 912

&lt;211&gt; 354

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 912

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Met Leu Trp Val Asp Lys Tyr Arg Pro Lys Ser Leu Asp Lys Val Ile
1          5          10          15

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Val His Glu Asp Ile Ala Gln Lys Leu Lys Lys Leu Val Ser Glu Gln  
 20 25 30  
 Asp Cys Pro His Leu Leu Phe Tyr Gly Pro Ser Gly Ser Gly Lys Lys  
 35 40 45  
 Thr Leu Ile Met Ala Leu Leu Lys Gln Ile Tyr Gly Ala Ser Ala Glu  
 50 55 60  
 Lys Val Lys Val Glu Asn Arg Ala Trp Lys Val Asp Ala Gly Ser Arg  
 65 70 75 80  
 Thr Ile Asp Leu Glu Leu Thr Thr Leu Ser Ser Thr Asn His Val Glu  
 85 90 95  
 Leu Thr Pro Ser Asp Ala Gly Phe Gln Asp Arg Tyr Ile Val Gln Glu  
 100 105 110  
 Ile Ile Lys Glu Met Ala Lys Asn Arg Pro Ile Asp Thr Lys Gly Lys  
 115 120 125  
 Lys Gly Tyr Lys Val Leu Val Leu Asn Glu Val Asp Lys Leu Ser Arg  
 130 135 140  
 Glu Ala Gln His Ser Leu Arg Arg Thr Met Glu Lys Tyr Ser Ser Ser  
 145 150 155 160  
 Cys Arg Leu Ile Leu Cys Cys Asn Ser Ser Ser Lys Val Thr Glu Ala  
 165 170 175  
 Ile Lys Ser Arg Cys Leu Asn Val Arg Ile Asn Ala Pro Ser Gln Glu  
 180 185 190  
 Glu Ile Val Lys Val Leu Glu Phe Val Ala Lys Lys Glu Ser Leu Gln  
 195 200 205  
 Leu Pro Gln Gly Phe Ala Ala Arg Ile Ala Glu Lys Ser Asn Arg Ser  
 210 215 220  
 Leu Arg Arg Ala Ile Leu Ser Leu Glu Thr Cys Arg Val Gln Asn Tyr  
 225 230 235 240  
 Pro Phe Thr Gly Asn Gln Val Ile Ser Pro Met Asp Trp Glu Glu Tyr  
 245 250 255  
 Val Ala Glu Ile Ala Thr Asp Met Met Lys Glu Gln Ser Pro Lys Lys  
 260 265 270

047-E2F-PCT.ST25.txt

Leu Phe Gln Val Arg Gly Lys Val Tyr Glu Leu Leu Val Asn Cys Ile  
275 280 285

Pro Pro Glu Val Ile Leu Lys Arg Leu Leu His Glu Leu Leu Lys Lys  
290 295 300

Leu Asp Ser Glu Leu Lys Leu Glu Val Cys His Trp Ala Ala Tyr Tyr  
305 310 315 320

Glu His Arg Met Arg Leu Gly Gln Lys Ala Ile Phe His Ile Glu Ala  
325 330 335

Phe Val Ala Lys Phe Met Ser Ile Tyr Lys Asn Phe Leu Ile Ser Thr  
340 345 350

Phe Gly

<210> 913

<211> 1128

<212> DNA

<213> Arabidopsis thaliana

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atgtcaccac cgtcaaaaag catcgtctac gaagaacacg gctctcccga ttccgtcacc 180  
agattggtga atctcccgcg ggtggaagtg aaagaaaacg acgtttgtgt taaatgatc 240  
gccgctccga tcaacccttc cgatatcaat cgaattgaag gtgtgtatcc ggtgaggcca 300  
ccggtaccag cggttggtgg ttatgaaggt gttggtgaag tttatgcagt tggctccaat 360  
gttaatggtt ttctctctgg tgattgggtc attccatctc caccttcttc agggacttgg 420  
cagacttatg ttgtgaagga agagagtgtg tggcacaaaa tcgataaaga gtgtccaatg 480  
gagtatgcag cgacgattac tgttaatcca ttgacggcct tgaggatgct tgaggacttt 540  
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tgtgtcattc agttggcaag actccgtggc atcagtacca tcaaccttat tcgtgacagg 660  
gctgggtcgg atgaagcaag agagcagctg aaagctctag gtgcagatga agtcttttca 720  
gagagtcaac tgaatgtaaa gaatgtgaaa agtcttttgg gtaacttacc tgaaccagct 780  
ctgggattca actgtgttgg tggcaatgct gcctctcttg tcctcaaata tctcagggaa 840



047-E2F-PCT.ST25.txt

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 ggtaaagtaa aagaatgcag agagatgata gactatctcc tcgggcttgc acgagacggg 1020  
 aagctaaat acgaaacgga attggttccc ttcgaagagt tccctgttgc tctcgataaa 1080  
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<210> 914

<211> 375

<212> PRT

<213> Arabidopsis thaliana

<400> 914

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 20 25 30

Cys Ile Lys Ser Phe Ser Thr Ile Met Ser Pro Pro Ser Lys Ala Ile  
 35 40 45

Val Tyr Glu Glu His Gly Ser Pro Asp Ser Val Thr Arg Leu Val Asn  
 50 55 60

Leu Pro Pro Val Glu Val Lys Glu Asn Asp Val Cys Val Lys Met Ile  
 65 70 75 80

Ala Ala Pro Ile Asn Pro Ser Asp Ile Asn Arg Ile Glu Gly Val Tyr  
 85 90 95

Pro Val Arg Pro Pro Val Pro Ala Val Gly Gly Tyr Glu Gly Val Gly  
 100 105 110

Glu Val Tyr Ala Val Gly Ser Asn Val Asn Gly Phe Ser Pro Gly Asp  
 115 120 125

Trp Val Ile Pro Ser Pro Pro Ser Ser Gly Thr Trp Gln Thr Tyr Val  
 130 135 140

Val Lys Glu Glu Ser Val Trp His Lys Ile Asp Lys Glu Cys Pro Met  
 145 150 155 160

047-E2F-PCT.ST25.txt

Glu Tyr Ala Ala Thr Ile Thr Val Asn Pro Leu Thr Ala Leu Arg Met  
 165 170 175  
 Leu Glu Asp Phe Val Asn Leu Asn Ser Gly Asp Ser Val Val Gln Asn  
 180 185 190  
 Gly Ala Thr Ser Ile Val Gly Gln Cys Val Ile Gln Leu Ala Arg Leu  
 195 200 205  
 Arg Gly Ile Ser Thr Ile Asn Leu Ile Arg Asp Arg Ala Gly Ser Asp  
 210 215 220  
 Glu Ala Arg Glu Gln Leu Lys Ala Leu Gly Ala Asp Glu Val Phe Ser  
 225 230 235 240  
 Glu Ser Gln Leu Asn Val Lys Asn Val Lys Ser Leu Leu Gly Asn Leu  
 245 250 255  
 Pro Glu Pro Ala Leu Gly Phe Asn Cys Val Gly Gly Asn Ala Ala Ser  
 260 265 270  
 Leu Val Leu Lys Tyr Leu Arg Glu Gly Gly Thr Met Val Thr Tyr Gly  
 275 280 285  
 Gly Met Ser Lys Lys Pro Ile Thr Val Ser Thr Thr Ser Phe Ile Phe  
 290 295 300  
 Lys Asp Leu Ala Leu Arg Gly Phe Trp Leu Gln Ser Trp Leu Ser Met  
 305 310 315 320  
 Gly Lys Val Lys Glu Cys Arg Glu Met Ile Asp Tyr Leu Leu Gly Leu  
 325 330 335  
 Ala Arg Asp Gly Lys Leu Lys Tyr Glu Thr Glu Leu Val Pro Phe Glu  
 340 345 350  
 Glu Phe Pro Val Ala Leu Asp Lys Ala Leu Gly Lys Leu Gly Arg Gln  
 355 360 365  
 Pro Lys Gln Val Ile Thr Phe  
 370 375

<210> 915

<211> 1182

<212> DNA

<213> *Arabidopsis thaliana*

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aataatgggt ttagtaaacg tggtcggttt atggaagctc cggagtatag aaacggcaag    180
gagtgtgtat cttcatcagt gaacagagag aacttcgtgt cgtcttcttc tagttctaata    240
gatccttcgc ttgttcacat cgctatgact ttggactcag agtatctccg tggatcaatc    300
gcagccgttc attctgttct tcgccacgcg tcttgtccag agaacgtctt cttccatttc    360
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tttccttctg tgaactttaa agtctacatt tttagggaag atacggtgat caatctcata    480
tcttcttcga ttagactagc ttggagaat ccgttgaaat atgctcggaa ctatctcgga    540
gatattcttg atcgaagtgt tgaacgagtc atttatcttg actcggatgt tataactgtg    600
gatgatatca caaagctttg gaacacgggt ttgaccgggt cagagtcgat cggagctccg    660
gagtattgtc acgcgaactt cactcagtat ttcaactccg ggttctggtc agaccgggt    720
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cgaggaagtt gtcggtcatt gcaccttggt cctgtgagct tgttgattg gagtggtaaa   1020
ggtaagccat ggggttagact tgatgagaag aggccttgtc cgttggatca tcttggggag   1080
ccatagtatt tgtataagca taagattgag agagctaag atcagtcctc gcttgggttt   1140
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&lt;210&gt; 916

&lt;211&gt; 393

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 916

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Met Ser Ser Arg Phe Ser Leu Thr Val Val Cys Leu Ile Ala Leu Leu
1       5              10              15

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Pro Phe Val Val Gly Ile Arg Leu Ile Pro Ala Arg Ile Thr Ser Val
Page 1413

```

Gly Asp Gly Gly Gly Gly Gly Gly Asn Asn Gly Phe Ser Lys Leu Gly  
35 40

Pro Phe Met Glu Ala Pro Glu Tyr Arg Asn Gly Lys Glu Cys Val Ser  
50 55 60

Ser Ser Val Asn Arg Glu Asn Phe Val Ser Ser Ser Ser Ser Asn  
65 70 75 80

Asp Pro Ser Leu Val His Ile Ala Met Thr Leu Asp Ser Glu Tyr Leu  
85 90 95

Arg Gly Ser Ile Ala Ala Val His Ser Val Leu Arg His Ala Ser Cys  
100 105 110

Pro Glu Asn Val Phe Phe His Phe Ile Ala Ala Glu Phe Asp Ser Ala  
115 120 125

Ser Pro Arg Val Leu Ser Gln Leu Val Arg Ser Thr Phe Pro Ser Leu  
130 135 140

Asn Phe Lys Val Tyr Ile Phe Arg Glu Asp Thr Val Ile Asn Leu Ile  
145 150 155 160

Ser Ser Ser Ile Arg Leu Ala Leu Glu Asn Pro Leu Asn Tyr Ala Arg  
165 170 175

Asn Tyr Leu Gly Asp Ile Leu Asp Arg Ser Val Glu Arg Val Ile Tyr  
180 185 190

Leu Asp Ser Asp Val Ile Thr Val Asp Asp Ile Thr Lys Leu Trp Asn  
195 200 205

Thr Val Leu Thr Gly Ser Arg Val Ile Gly Ala Pro Glu Tyr Cys His  
210 215 220

Ala Asn Phe Thr Gln Tyr Phe Thr Ser Gly Phe Trp Ser Asp Pro Ala  
225 230 235 240

Leu Pro Gly Leu Ile Ser Gly Gln Lys Pro Cys Tyr Phe Asn Thr Gly  
245 250 255

Val Met Val Met Asp Leu Val Arg Trp Arg Glu Gly Asn Tyr Arg Glu  
260 265 270

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Lys Leu Glu Gln Trp Met Gln Leu Gln Lys Lys Met Arg Ile Tyr Asp  
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Leu Gly Ser Leu Pro Pro Phe Leu Leu Val Phe Ala Gly Asn Val Glu  
290 295 300

Ala Ile Asp His Arg Trp Asn Gln His Gly Leu Gly Gly Asp Asn Ile  
305 310 315 320

Arg Gly Ser Cys Arg Ser Leu His Pro Gly Pro Val Ser Leu Leu His  
325 330 335

Trp Ser Gly Lys Gly Lys Pro Trp Val Arg Leu Asp Glu Lys Arg Pro  
340 345 350

Cys Pro Leu Asp His Leu Trp Glu Pro Tyr Asp Leu Tyr Lys His Lys  
355 360 365

Ile Glu Arg Ala Lys Asp Gln Ser Leu Leu Gly Phe Ala Ser Leu Ser  
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Glu Leu Thr Asp Asp Ser Ser Phe Leu  
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<211> 453

<212> DNA

<213> Arabidopsis thaliana

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<211> 150

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<212> PRT

<213> Arabidopsis thaliana

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Gly Leu Gln Phe Pro Val Gly Arg Ile Ala Arg Tyr Leu Lys Lys Gly  
35 40 45

Arg Tyr Ala Leu Arg Tyr Gly Ser Gly Ala Pro Val Tyr Leu Ala Ala  
50 55 60

Val Leu Glu Tyr Leu Ala Ala Glu Val Leu Glu Leu Ala Gly Asn Ala  
65 70 75 80

Ala Arg Asp Asn Lys Lys Asn Arg Ile Asn Pro Arg His Leu Cys Leu  
85 90 95

Ala Ile Arg Asn Asp Glu Glu Leu Gly Arg Leu Leu His Gly Val Thr  
100 105 110

Ile Ala Ser Gly Gly Val Leu Pro Asn Ile Asn Pro Val Leu Leu Pro  
115 120 125

Lys Lys Ser Thr Ala Ser Ser Ser Gln Ala Glu Lys Ala Ser Ala Thr  
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Lys Ser Pro Lys Lys Ala  
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<210> 919

<211> 1929

<212> DNA

<213> Arabidopsis thaliana

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<211> 642

<212> PRT

<213> *Arabidopsis thaliana*

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20 25 30

Asp Lys Lys Leu Leu Trp Arg Asp Met Ser Thr Lys Met Lys Phe Pro  
35 40 45

Ser Phe Ser Ala Ala Glu Leu Pro Asp Leu Arg Lys Ser Asn Lys Arg  
50 55 60

Arg Gly Ser Leu Arg Met Ile Lys Cys Arg Ala Ala Gly Ala Asp Gly  
65 70 75 80

Gly Arg Val Ala Val Gly Asp Asp Val Phe Ser Val Thr Thr Ser Ser  
85 90 95

Lys Tyr Glu Val Asp Tyr Leu Gly Gln Ser Thr Lys Gly Asp Leu Asn  
100 105 110

Leu Lys Leu Asp Pro Leu Gln Ser Phe Gly Asp Gly Gln Ala Thr Leu  
115 120 125

Glu Gly Pro Ile Glu Glu Val Ala Arg Thr Glu Ala Gln Ala Ala Glu  
130 135 140

Asn Leu Ile Arg Glu Leu Gly Ile Gln Gly Pro Phe Ser Ala Gln His  
145 150 155 160

Ser Pro Arg Gly Ile Phe Cys Ser Arg Thr Leu Asn Leu Arg Ser Ile  
165 170 175

Ser Ala Ile Gly Tyr Asp Met Asp Tyr Thr Leu Met His Tyr Asn Val  
180 185 190

Met Ala Trp Glu Gly Lys Ala Tyr Asp Tyr Cys Met Glu Asn Leu Lys  
195 200 205



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Ser Met Gly Phe Pro Val Asp Gly Leu Ala Phe Asp Pro Glu Leu Val  
210 215 220

Ile Arg Gly Leu Met Ile Asp Lys Glu Lys Gly Asn Leu Val Lys Ala  
225 230 235 240

Asp Arg Phe Gly Tyr Val Lys Arg Ala Met His Gly Thr Lys Met Leu  
245 250 255

Ser Asn Lys Ala Val Ser Glu Ile Tyr Gly Arg Glu Leu Val Asp Leu  
260 265 270

Arg Asn Gln Ser Arg Trp Glu Phe Leu Asn Thr Phe Phe Ser Val Ser  
275 280 285

Glu Ala Leu Ala Tyr Ala Gln Met Val Asp Arg Leu Asp Asp Gly Phe  
290 295 300

Ile Ser Ala Asp Leu Gly Thr Leu Asp Tyr Lys Gly Leu Tyr Lys Ala  
305 310 315 320

Val Ala Lys Ala Leu Phe Arg Ala His Val Glu Gly Gln Leu Lys Ser  
325 330 335

Glu Ile Met Ser Lys Pro Glu Leu Phe Val Glu Pro Asp Pro Glu Leu  
340 345 350

Pro Leu Ala Leu Leu Asp Gln Lys Glu Ala Gly Lys Lys Leu Leu Leu  
355 360 365

Ile Thr Asn Ser Asp Tyr His Tyr Thr Asp Lys Met Met Lys His Ser  
370 375 380

Phe Asn Lys Phe Leu Pro Asn Asp Met Asp Trp Arg Asp Leu Phe Asp  
385 390 395 400

Met Val Ile Val Ser Ala Arg Lys Pro Glu Phe Phe Gln Met Ser His  
405 410 415

Pro Leu Tyr Glu Val Val Thr Gly Glu Gly Leu Met Arg Pro Cys Phe  
420 425 430

Lys Ala Glu Thr Gly Gly Leu Tyr Ser Gly Gly Ser Ala Gln Met Ile  
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Glu Ser Ser Leu Asn Val His Gly Asp Glu Ile Leu Tyr Val Gly Asp

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455

His Ile Tyr Thr Asp Val Ser Val Ser Lys Val His Leu Arg Trp Arg  
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485 490 495

Gly Ser Arg Gly His Arg Glu Glu Leu Ile Glu Leu Ile Asn Gln Lys  
500 505 510

Glu Val Val Gly Asp Leu Phe Asn Gln Leu Arg Leu Ala Leu Gln Arg  
515 520 525

Arg Ser Lys Gly Arg Pro Ala Gln Thr Leu Ala Ala Thr Asn Leu Asp  
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Asp Gln Glu Leu Thr Glu Thr Met Gln Lys Leu Leu Ile Val Met Gln  
545 550 555 560

Arg Leu Asp Asp Lys Ile Gly Leu Met Leu Glu Thr Asp Gly Glu Leu  
565 570 575

Phe Asn Lys Arg Trp Gly Phe Leu Ser Arg Ala Gly Leu Trp Asp Lys  
580 585 590

Ser His Leu Met Arg Gln Ile Glu Lys Tyr Ala Asp Ile Tyr Thr Ser  
595 600 605

Arg Val Ser Asn Phe Leu Asn Tyr Thr Pro Phe Met Tyr Phe Arg Ser  
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<211> 393

<212> DNA

<213> Arabidopsis thaliana

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Page 1420

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<210> 922

<211> 130

<212> PRT

<213> Arabidopsis thaliana

<400> 922

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Val Met Leu Glu Leu Leu Thr Gly Arg Lys Pro Phe Asp Ser Thr Arg  
 20 25 30

Ser Arg Ser Glu Gln Ser Leu Val Arg Trp Ala Thr Pro Gln Leu His  
 35 40 45

Asp Ile Asp Ala Leu Ala Lys Met Val Asp Pro Ala Leu Lys Gly Leu  
 50 55 60

Tyr Pro Val Lys Ser Leu Ser Arg Phe Ala Asp Val Ile Ala Leu Cys  
 65 70 75 80

Val Gln Pro Glu Pro Glu Phe Arg Pro Pro Met Ser Glu Val Val Gln  
 85 90 95

Ala Leu Val Val Leu Val Gln Arg Ala Asn Met Ser Lys Arg Thr Val  
 100 105 110

Gly Val Asp Pro Ser Gln Arg Ala Gly Ser Ala Asp Thr Thr Ser Asp  
 115 120 125

Tyr Met  
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&lt;211&gt; 732

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 923

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&lt;210&gt; 924

&lt;211&gt; 243

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 924

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Asp Asp Ala Arg Tyr Tyr Leu Asp Gly Arg Asp Phe Asp Gly Ser Arg
20          25          30

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Ile Thr Val Glu Ala Ser Arg Gly Ala Pro Arg Gly Ser Arg Asp Asn
35          40          45

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Gly Ser Arg Gly Pro Pro Pro Gly Ser Gly Arg Cys Phe Asn Cys Gly
50          55          60

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Val Asp Gly His Trp Ala Arg Asp Cys Thr Ala Gly Asp Trp Lys Asn  
65 70 75 80

Lys Cys Tyr Arg Cys Gly Glu Arg Gly His Ile Glu Arg Asn Cys Lys  
85 90 95

Asn Ser Pro Ser Pro Lys Lys Ala Arg Gln Gly Gly Ser Tyr Ser Arg  
100 105 110

Ser Pro Val Lys Ser Arg Ser Pro Arg Arg Arg Arg Ser Pro Ser Arg  
115 120 125

Ser Arg Ser Tyr Ser Arg Gly Arg Ser Tyr Ser Arg Ser Arg Ser Pro  
130 135 140

Val Arg Arg Glu Lys Ser Val Glu Asp Arg Ser Arg Ser Pro Lys Ala  
145 150 155 160

Met Glu Arg Ser Val Ser Pro Lys Gly Arg Asp Gln Ser Leu Ser Pro  
165 170 175

Asp Arg Lys Val Ile Asp Ala Ser Pro Lys Arg Gly Ser Asp Tyr Asp  
180 185 190

Gly Ser Pro Lys Glu Asn Gly Asn Gly Arg Asn Ser Ala Ser Pro Ile  
195 200 205

Val Gly Gly Gly Glu Ser Pro Val Gly Leu Asn Gly Gln Asp Arg Ser  
210 215 220

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225 230 235 240

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<211> 993

<212> DNA

<213> Arabidopsis thaliana

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<211> 330

<212> PRT

<213> *Arabidopsis thaliana*

<400> 926

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20 25 30

Ser Pro Gln Val Ser Glu Ala Leu Ser Asn Gly Arg Ala Val Val Ala  
35 40 45

Leu Glu Ser Thr Ile Ile Ser His Gly Met Pro Tyr Pro Gln Asn Leu  
50 55 60

Gln Thr Ala Lys Glu Val Glu Ser Ile Val Arg Glu Asn Gly Ala Ile  
65 70 75 80

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Pro Ala Thr Ile Ala Ile Leu Asn Gly Val Pro Cys Ile Gly Leu Ser  
85 90 95

Glu Glu Glu Leu Glu Arg Leu Ala Ser Leu Gly Lys Ser Val Gln Lys  
100 105 110

Thr Ala Gly Arg Asp Ile Ala Asn Val Val Ala Thr Arg Gly Asn Gly  
115 120 125

Ala Thr Thr Val Ser Ala Thr Leu Phe Phe Ala Ser Met Val Gly Ile  
130 135 140

Gln Val Phe Val Thr Gly Gly Ile Gly Gly Val His Arg His Ala Asn  
145 150 155 160

His Ser Met Asp Ile Ser Ser Asp Leu Thr Ala Leu Gly Arg Thr Pro  
165 170 175

Ile Ala Val Ile Ser Ala Gly Val Lys Ser Ile Leu Asp Ile Pro Lys  
180 185 190

Thr Leu Glu Tyr Leu Glu Thr Gln Glu Val Tyr Val Ala Ala Tyr Lys  
195 200 205

Ser Asp Glu Phe Pro Ala Phe Phe Thr Glu Lys Ser Gly Cys Lys Ala  
210 215 220

Pro Ser Arg Val Asn Ser Pro Glu Asp Cys Ala Arg Val Ile Asp Ala  
225 230 235 240

Asn Met Lys Leu Asn Arg Gln Ala Gly Ile Leu Phe Ala Ile Pro Ile  
245 250 255

Pro Lys His His Ser Ala Ala Gly Asn Leu Ile Glu Ser Ala Thr Gln  
260 265 270

Arg Ala Leu Thr Glu Ala Arg Glu Gln Asn Val Thr Gly Asn Ala Glu  
275 280 285

Thr Pro Phe Leu Leu Ala Arg Val Asn Glu Leu Thr Gly Gly Thr Ser  
290 295 300

Leu Ala Ala Asn Ile Ala Leu Val Lys Asn Asn Ala Leu Ile Gly Ser  
305 310 315 320

Gln Ile Ala Val Ala Leu Ser Gln Leu Met

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&lt;211&gt; 636

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 927

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&lt;210&gt; 928

&lt;211&gt; 211

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 928

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Glu Cys Gly Ser Glu Ser Ala Asn Pro Cys Val Asn Lys Ala Lys Ala	
35 40 45	

Leu Pro Leu Lys Val Ile Ala Ile Phe Val Ile Leu Ile Ala Ser Met	
50 55 60	



Ile Gly Val Gly Ala Pro Leu Phe Ser Arg Asn Val Ser Phe Leu Gln  
65 70 75 80

Pro Asp Gly Asn Ile Phe Thr Ile Ile Lys Cys Phe Ala Ser Gly Ile  
85 90 95

Ile Leu Gly Thr Gly Phe Met His Val Leu Pro Asp Ser Phe Glu Met  
100 105 110

Leu Ser Ser Ile Cys Leu Glu Glu Asn Pro Trp His Lys Phe Pro Phe  
115 120 125

Ser Gly Phe Leu Ala Met Leu Ser Gly Leu Ile Thr Leu Ala Ile Asp  
130 135 140

Ser Met Ala Thr Ser Leu Tyr Thr Ser Lys Asn Ala Val Gly Ile Met  
145 150 155 160

Pro His Gly His Gly His Gly His Gly Pro Ala Asn Asp Val Thr Leu  
165 170 175

Pro Ile Lys Glu Asp Asp Ser Ser Asn Ala Gln Leu Leu Arg Tyr Arg  
180 185 190

Val Ile Ala Met Val Arg Thr His Ile Tyr Thr Tyr Arg Ile Ser Leu  
195 200 205

Tyr Phe Lys  
210

<210> 929

<211> 1131

<212> DNA

<213> Arabidopsis thaliana

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<212> PRT

<213> *Arabidopsis thaliana*

<400> 930

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Ser Pro Ser Ala Thr Thr Ala Ala Ala Pro Pro Ala Lys Ser Thr Ala  
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Val Ser Thr Ala Ala Asp Ser Asp Ser Gly Ser Glu Thr Glu Thr Asp  
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Ser Asp Ser Glu Ser Thr Asn Pro Pro Asn Ser Gly Ser Gly Lys Thr  
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Ser Ser Ala Thr Leu Ala Leu Pro Ala Met Lys Ser Gly Thr Lys Arg  
115 120 125

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130 135 140

Asp Glu Glu Ser Val Lys Lys Pro Gly Gly Phe Gln Arg Leu Trp Ser  
145 150 155 160

Glu Glu Asp Glu Ile Leu Val Leu Gln Gly Met Ile Asp Phe Lys Ala  
165 170 175

Asp Thr Gly Lys Ser Pro Tyr Val Asp Thr Asn Ala Phe Tyr Asp Phe  
180 185 190

Leu Lys Lys Ser Ile Ser Phe Glu Val Ser Lys Asn Gln Phe Met Asp  
195 200 205

Lys Ile Arg Ser Leu Arg Lys Lys Tyr Ile Gly Lys Glu Gly Arg Asn  
210 215 220

Glu Pro Ser Phe Val Lys Ala His Asp Lys Lys Ala Phe Glu Leu Ser  
225 230 235 240

Lys Phe Ile Trp Gly Pro Lys Gly Ile Ala Leu Asp Ser Asn Val Lys  
245 250 255

Ser Asn Gly Val Ser Lys Lys Ser Val Ala Lys Lys Lys Ile Asp Ser  
260 265 270

Val Lys Gln Glu Leu Val Phe Ala Gly Gly Ser Ser Thr Asn Gly Lys  
275 280 285

Lys Val Glu Glu Asp Gly Gly Asp Asp Gly Cys Asp Trp Phe Asp Asn  
290 295 300

Ser Ser Leu Val Arg Met Ile Ala Ser Leu Gly Val Asp Glu Tyr Tyr  
305 310 315 320

Val Lys Gln Gln Trp Ser Leu Val Ser Val Glu Ser Lys Lys Ile Val  
325 330 335

Glu Glu Lys Tyr Lys Leu Leu Gln Ala Lys Glu Leu Glu Phe Val Leu  
Page 1429

Glu Lys Thr Lys Phe Leu Asn Glu Val Ala Ser Met Phe Val Glu Ala  
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Ser Lys Asn Lys Pro Leu Asp Thr  
370 375

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<213> Arabidopsis thaliana

<400> 932

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 35 40 45

Asp Ala Ala Leu Ser Ile Ser Pro Arg Leu Glu Thr Ala Leu Glu Leu  
 50 55 60

Lys Ala Arg Ser Leu Leu Phe Leu Arg Arg Phe Lys Asp Val Ala Asp  
 65 70 75 80

Met Leu Gln Asp Tyr Ile Pro Ser Leu Lys Leu Asp Asp Glu Gly Ser  
 85 90 95

Ala Ser Ser Gln Gly Ser Ser Ser Ser Asp Gly Ile Asn Leu Leu Ser  
 100 105 110

Asp Ala Ser Ser Pro Gly Ser Phe Lys Cys Phe Ser Val Ser Asp Leu  
 115 120 125

Lys Lys Lys Val Met Ala Gly Ile Cys Lys Lys Cys Asp Lys Glu Gly  
 130 135 140

Gln Trp Arg Tyr Val Val Leu Gly Gln Ala Cys Cys His Leu Gly Leu  
 Page 1431

145                      150                      160

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165                      170                      175

Ala Glu Phe Arg Arg Arg Ser Ile Cys Trp Ser Asp Asp Ser Phe Leu  
180                      185                      190

Leu Leu Ser Glu Ser Ser Ser Ala Ser Ser Pro Pro Pro Glu Ser Glu  
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Asn Phe Thr His Leu Leu Ala His Ile Lys Leu Leu Leu Arg Arg Arg  
210                      215                      220

Ala Ala Ala Ile Ala Ala Leu Asp Ala Gly Leu Phe Ser Glu Ser Ile  
225                      230                      235                      240

Arg His Phe Ser Lys Ile Val Asp Gly Arg Arg Pro Ala Pro Gln Gly  
245                      250                      255

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Gly Arg Ile Ala Glu Ala Ile Ala Asp Cys Asn Lys Thr Leu Ala Leu  
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Glu Pro Ser Cys Ile Gln Ala Leu Glu Thr Arg Ala Ala Leu Leu Glu  
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Thr Val Arg Cys Phe Pro Asp Ser Leu His Asp Leu Glu His Leu Lys  
305                      310                      315                      320

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325                      330                      335

Trp Lys Arg His Asn Val Lys Tyr Arg Glu Ile Pro Gly Lys Leu Cys  
340                      345                      350

Val Leu Thr Thr Lys Thr Gln Lys Leu Lys Gln Lys Ile Ala Asn Gly  
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Glu Thr Gly Asn Val Asp Tyr Tyr Gly Leu Ile Gly Val Arg Arg Gly  
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Cys Thr Arg Ser Glu Leu Asp Arg Ala His Leu Leu Leu Cys Leu Arg  
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Leu Leu Leu Tyr Arg Leu Ile Gln Lys Gly Tyr Thr Ala Val Thr Ala  
435 440 445

Ile Ile Ala Glu Glu Gln Arg Lys Asn Ala Ile Ala His Ala Gln Lys  
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Ile Glu Glu Arg Lys Pro Val Glu Lys Ser Gly Ser Ile Lys Arg Thr  
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Gly Asn Ala Glu Thr Lys Pro Val Asn Ser Asn Ala Tyr Gln Gly Val  
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Lys Ala Glu Glu Lys Ser Asn Val Leu Leu Asp Lys Ala Lys Asp Ala  
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Asp Ala Ala Val Gly Gly Val Asn Phe Val Lys Asp Lys Thr Gly Leu  
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Asn Lys  
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20 25 30



Ala Gly His Lys Gln Gly Pro Asn Leu Asn Gly Leu Phe Gly Arg Gln  
 35 40 45

Ser Gly Thr Thr Ala Gly Tyr Ser Tyr Ser Ala Ala Asn Lys Asn Lys  
 50 55 60

Ala Val Glu Trp Glu Glu Lys Ala Leu Tyr Asp Tyr Leu Leu Asn Pro  
 65 70 75 80

Lys Lys Tyr Ile Pro Gly Thr Lys Met Val Phe Pro Gly Leu Lys Lys  
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Pro Lys

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35 40 45

Ser Lys Arg Met Ser Phe Arg Tyr Ala Leu Lys Lys Asn Arg Ser Val  
50 55 60

Leu Lys Lys Leu Asn Ser Lys Asp Asp Val Ala Leu Trp Leu Asp Ser  
65 70 75 80

Ile Val Ser Gly Glu Ile Pro His Val Ala Asp Val Pro Ala Thr Val  
85 90 95

Met Thr Glu Lys Asp Ala Gly Gly Phe Asn Met Ser Thr Phe Met Asn  
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Gly Phe Ser Trp Thr Cys Arg Lys Arg Arg Lys His Tyr Gln Ser Tyr  
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145 150 155 160

Ala Glu Gln His Lys Arg Leu Val Ala Tyr Ile Glu Asp Leu Tyr Glu  
165 170 175

Asp Ser Lys Gly Lys Lys Met Val Val Val Arg Trp Phe His Lys Thr  
180 185 190

Glu Glu Val Gly Ser Val Leu Ser Asp Asp Asp Asn Asp Arg Glu Ile  
195 200 205

Phe Phe Ser Leu Asn Arg Gln Asp Ile Ser Ile Glu Cys Ile Asp Tyr  
210 215 220

Leu Ala Thr Val Leu Ser Pro Gln His Tyr Glu Lys Phe Leu Lys Val  
225 230 235 240

Pro Met His Val Gln Thr Val Ala Phe Phe Cys Gln Lys Leu Tyr Gly  
245 250 255

Asp Asp Gly Leu Lys Pro Tyr Asp Ile Thr Gln Leu Glu Gly Tyr Trp  
260 265 270

Arg Gln Glu Met Leu Arg Tyr Leu Asn Val Ser Ile Leu Lys Ser Phe  
275 280 285

Glu Gly Ala Gln Ala Pro Gly Thr Asp Pro Gly Leu Lys Ala Pro Leu  
290 295 300

Val Gly Cys Val Gly Ile Arg Ser Arg Lys Arg Arg Arg Pro Ser Pro  
305 310 315 320

Val Gly Thr Leu Asn Val Ser Tyr Ala Gly Asp Met Lys Gly Asp Cys  
325 330 335

Lys Ser Ser Pro Asp Ser Val Leu Ala Val Thr Asp Ala Ser Ile Phe  
340 345 350

Lys Gly Asp Glu Asp Gly Ser Ser His His Ile Lys Lys Gly Ser Leu

Ile Glu Val Leu Ser Glu Asp Ser Gly Ile Arg Gly Cys Trp Phe Lys  
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Ala Leu Val Leu Lys Lys His Lys Asp Lys Val Lys Val Gln Tyr Gln  
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Asp Ile Gln Asp Ala Asp Asp Glu Ser Lys Lys Leu Glu Glu Trp Ile  
405 410 415

Leu Thr Ser Arg Val Ala Ala Gly Asp His Leu Gly Asp Leu Arg Ile  
420 425 430

Lys Gly Arg Lys Val Val Arg Pro Met Leu Lys Pro Ser Lys Glu Asn  
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Asp Val Cys Val Ile Gly Val Gly Met Pro Val Asp Val Trp Trp Cys  
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<213> Arabidopsis thaliana

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 Glu Phe Gly Ser Asp Val Ser Arg Met Ser Met Val Gly Asn Gly Ile  
 100 105 110  
 Arg Gln Tyr Glu Arg Thr Asn Pro Pro Val His Glu Phe Gly Asn Lys  
 115 120 125  
 Leu Gly His Ile His Ser Ala Pro Glu Ala Ser Leu Cys Gln Asp Arg  
 130 135 140  
 Ser Leu Gly Asn Phe His Gly Tyr Ala Ser Ser Ser Ala Ser Gly Ser  
 145 150 155 160  
 Leu Thr Ala Lys Val Lys Val Leu Cys Ser Phe Gly Gly Lys Ile Leu  
 165 170 175  
 Pro Arg Pro Gly Asp Ser Lys Leu Arg Tyr Val Gly Gly Glu Thr His  
 180 185 190  
 Ile Ile Ser Ile Arg Lys Asp Ile Ser Trp Gln Glu Leu Arg Gln Lys  
 195 200 205  
 Val Leu Glu Ile Tyr Tyr Arg Thr His Val Val Lys Tyr Gln Leu Pro  
 210 215 220  
 Gly Glu Asp Leu Asp Ala Leu Val Ser Val Ser Cys Asp Glu Asp Leu  
 225 230 235 240  
 Leu Asn Met Met Glu Glu Tyr Asn Glu Met Glu Asn Arg Gly Gly Ser  
 245 250 255  
 Gln Lys Leu Arg Met Phe Leu Phe Ser Val Ser Asp Leu Asp Gly Ala  
 260 265 270  
 Leu Leu Gly Val Asn Lys Ser Asp Val Asp Ser Glu Phe Gln Tyr Val  
 275 280 285  
 Val Ala Val Asn Asp Met Asp Leu Gly Ser Arg Ser Asn Ser Thr Leu  
 290 295 300  
 Asn Gly Leu Asp Ser Ser Ser Ala Asn Asn Leu Ala Glu Leu Asp Val

305 310 320

Arg Asn Thr Glu Gly Ile Asn Gly Val Gly Pro Ser Gln Leu Thr Gly  
325 330

Ile Asp Phe Gln Gln Ser Ser Met Gln Tyr Ser Glu Ser Ala Pro Pro  
340 345

Thr Ser Phe Ala Gln Tyr Pro Gln Ser Ile Pro His Asn Gly Ala Phe  
355 360 365

Gln Phe Gln Gln Ala Val Pro Pro Asn Ala Thr Leu Gln Tyr Ala Pro  
370 375 380

Ser Asn Pro Pro Ser Ser Ser Val His Tyr Pro Gln Ser Ile Leu Pro  
385 390 395 400

Asn Ser Thr Leu Gln Tyr Pro Gln Ser Ile Ser Ser Ser Ser Tyr Gly  
405 410 415

Leu Tyr Pro Gln Tyr Tyr Gly Glu Thr Glu Gln Phe Pro Met Gln Tyr  
420 425 430

His Asp His Asn Ser Ser Asn Tyr Ser Ile Pro Ile Pro Phe Pro Gly  
435 440 445

Gln Pro Tyr Pro His Pro Gly Ile Thr Gln Gln Asn Ala Pro Val Gln  
450 455 460

Val Glu Glu Pro Asn Ile Lys Pro Glu Thr Lys Val Arg Asp Tyr Val  
465 470 475 480

Glu Pro Glu Asn Arg His Ile Leu Ala Thr Asn His Gln Asn Pro Pro  
485 490 495

Gln Ala Asp Asp Thr Glu Val Lys Asn Arg Glu Pro Ser Val Ala Thr  
500 505 510

Thr Val Pro Ser Gln Asp Ala Ala His Met Leu Pro Pro Arg Arg Asp  
515 520 525

Thr Arg Gln Asn Thr Pro Val Lys Pro Ser Thr Tyr Arg Asp Ala Val  
530 535 540

Ile Thr Glu Gln Val Pro Val Ser Gly Glu Asp Asp Gln Leu Ser Thr  
545 550 555 560



Ser Ser Gly Thr Cys Gly Leu Val His Thr Asp Ser Glu Ser Asn Leu  
 565 570 575  
 Ile Asp Leu Asp Tyr Pro Glu Pro Leu Gln Pro Thr Arg Arg Val Tyr  
 580 585 590  
 Arg Ser Glu Arg Ile Pro Arg Glu Gln Leu Glu Met Leu Asn Arg Leu  
 595 600 605  
 Ser Lys Ser Asp Asp Ser Leu Gly Ser Gln Phe Leu Met Ser His Pro  
 610 615 620  
 Gln Ala Ser Thr Gly Gln Gln Glu Pro Ala Lys Glu Ala Ala Gly Ile  
 625 630 635 640  
 Ser His Glu Asp Ser His Ile Val Asn Asp Val Glu Asn Ile Ser Gly  
 645 650 655  
 Asn Val Val Ala Ser Asn Glu Thr Leu Asp Lys Arg Thr Val Ser Gly  
 660 665 670  
 Gly Gly Ile Glu Thr Glu Ala Arg Asn Leu Ser His Val Asp Thr Glu  
 675 680 685  
 Arg Ser His Asp Ile Pro Glu Lys Gln Thr Ser Ser Gly Val Leu Ile  
 690 695 700  
 Asp Ile Asn Asp Arg Phe Pro Gln Asp Phe Leu Ser Glu Ile Phe Ala  
 705 710 715 720  
 Lys Ala Leu Ser Asp Asp Met Pro Ser Gly Ala Asn Pro Tyr Gln His  
 725 730 735  
 Asp Gly Ala Gly Val Ser Leu Asn Val Glu Asn His Asp Pro Lys Asn  
 740 745 750  
 Trp Ser Tyr Phe Arg Asn Leu Ala Asp Glu Gln Phe Ser Asp Arg Asp  
 755 760 765  
 Val Ala Tyr Ile Asp Arg Thr Pro Gly Phe Pro Ser Asp Met Glu Asp  
 770 775 780  
 Gly Gly Glu Ile Ala Arg Leu His Gln Val Ala Pro Leu Thr Glu Asn  
 785 790 795 800  
 Arg Val Asp Pro Gln Met Lys Val Thr Glu Ser Glu Glu Phe Asp Ala  
 805 810 815

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Met Val Glu Asn Leu Arg Thr Ser Asp Cys Glu Gln Glu Asp Glu Lys  
820 825 830

Ser Glu Thr Arg Asn Ala Gly Leu Pro Pro Val Gly Pro Ser Leu Ala  
835 840 845

Asp Tyr Asp Thr Ser Gly Leu Gln Ile Ile Met Asn Asp Asp Leu Glu  
850 855 860

Glu Leu Lys Glu Leu Gly Ser Gly Thr Phe Gly Thr Val Tyr His Gly  
865 870 875

Lys Trp Arg Gly Ser Asp Val Ala Ile Lys Arg Ile Lys Lys Ser Cys  
885 890 895

Phe Ala Gly Arg Ser Ser Glu Gln Glu Arg Leu Thr Gly Glu Phe Trp  
900 905 910

Gly Glu Ala Glu Ile Leu Ser Lys Leu His His Pro Asn Val Val Ala  
915 920 925

Phe Tyr Gly Val Val Lys Asp Gly Pro Gly Ala Thr Leu Ala Thr Val  
930 935 940

Thr Glu Tyr Met Val Asp Gly Ser Leu Arg His Val Leu Val Arg Lys  
945 950 955 960

Asp Arg His Leu Asp Arg Arg Lys Arg Leu Ile Ile Ala Met Asp Ala  
965 970 975

Ala Phe Gly Met Glu Tyr Leu His Ala Lys Asn Ile Val His Phe Asp  
980 985 990

Leu Lys Cys Asp Asn Leu Leu Val Asn Leu Lys Asp Pro Ser Arg Pro  
995 1000 1005

Ile Cys Lys Val Gly Asp Phe Gly Leu Ser Lys Ile Lys Arg Asn  
1010 1015 1020

Thr Leu Val Ser Gly Gly Val Arg Gly Thr Leu Pro Trp Met Ala  
1025 1030 1035

Pro Glu Leu Leu Asn Gly Ser Ser Ser Lys Val Ser Glu Lys Val  
1040 1045 1050

Asp Val Phe Ser Phe Gly Ile Val Leu Trp Glu Ile Leu Thr Gly  
1055 1060 1065

Glu Glu Pro Tyr Ala Asn Met His Tyr Gly Ala Ile Ile Gly Gly  
1070 1075 1080

Ile Val Asn Asn Thr Leu Arg Pro Thr Ile Pro Ser Tyr Cys Asp  
1085 1090 1095

Ser Asp Trp Arg Ile Leu Met Glu Glu Cys Trp Ala Pro Asn Pro  
1100 1105 1110

Thr Ala Arg Pro Ser Phe Thr Glu Ile Ala Gly Arg Leu Arg Val  
1115 1120 1125

Met Ser Thr Ala Ala Thr Ser Asn Gln Ser Lys Pro Pro Ala His  
1130 1135 1140

Lys Ala Ser Lys  
1145

<210> 941

<211> 1899

<212> DNA

<213> Arabidopsis thaliana

<400> 941  
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tctgcttcag ttgatccac cgcacctacc ggtcttccac cttcttctta caacagcgtt 180  
cttcttccga tggatgaaat ccagattgct aaacaaaaag cacaagaaat cgctgctcgt 240  
cttcttaata gcgctgatgc taaacgtcct cgtgttgaca atggtgcttc ttatgattat 300  
ggtgacaaca aaggatttag ctcatatccc tctgagggtg agcagatgac agggacggtt 360  
ccgtcttcga taccggtttc gtatggttagc ttcaaggaa ctactaagaa gattgatatt 420  
cggaatatga gagttggtgt tatcattggt aaagggtggag agactattaa gtatcttcag 480  
cttcagtcgt gagctaagat tcaggttact agagatatgg atgcagaccc taattgtgct 540  
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actgacgtcc ttcaagaggc tgaggcaggc aatacagctg gttcaggtgg aggaggcggc 660  
cgtaggatgg gtggacaagc aggggctgat caatttgta tgaataatcc gaataacaag 720  
gttggtttga taattggtaa aggaggtgaa acaatcaaat ctatgcaagc taagactgga 780

gctagaattc aggttattcc ttacatttg cccctggag acccaacgcc agaacggact 840  
 ttgcagattg atgggataac cgaacagatt gaacatgcta aacaattagt taatgaaatc 900  
 atcagtggcg agaaccgtat gagaaactca gcaatgggtg gaggtcatcc acaacaaggt 960  
 gggtatcaag cccgccacc ctcaagctgg gcaccacctg gtggtccgcc agcacaacct 1020  
 gggtatgggt gttacatgca accaggagca tatccaggtc cacctcagta tggatcaatca 1080  
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 ccatcccagc agagcgcgca aggtgagtat gattattacg gtcagcaaca gtctcagcaa 1200  
 ccaagcagtg gtggtagctc agccccacca acagatacca caggggtacaa ttactaccag 1260  
 catgcttctg gttatggcca agctggctag ggataccagc aagatgggta tggagcttac 1320  
 aatgcctcgc agcaatcggg atatgggtcaa gctgctgggt atgatcaaca ggggtggttac 1380  
 ggagcacca ctaatccaag tcaagaggaa gatgcatctc aagccgctcc accatcgta 1440  
 gctcagtcgt gacaggctgg gtatgggtaca actggtaaac agccgcctgc tcaaggtagt 1500  
 actggtcagg cagggtagtg agctcctcca acttctcagg ctggttacag cagccagcca 1560  
 gcagcagctt acaattctgg gtatggagca ccaccacctg ctcaaaagcc accgacttat 1620  
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 ccacctgctg gaccgcccac agcatccccg aaaagttga 1899

<210> 942

<211> 632

<212> PRT

<213> *Arabidopsis thaliana*

<400> 942

Met Ala Asp Glu Ser Gln Tyr Ser Ser Asp Thr Tyr Ser Asn Lys Arg  
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Lys Tyr Glu Glu Pro Thr Ala Pro Pro Pro Ser Thr Arg Arg Pro Thr  
20 25 30

Gly Phe Ser Ser Gly Pro Ile Pro Ser Ala Ser Val Asp Pro Thr Ala  
35 40 45

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Pro Thr Gly Leu Pro Pro Ser Ser Tyr Asn Ser Val Pro Pro Pro Met  
50 55 60

Asp Glu Ile Gln Ile Ala Lys Gln Lys Ala Gln Glu Ile Ala Ala Arg  
65 70 75 80

Leu Leu Asn Ser Ala Asp Ala Lys Arg Pro Arg Val Asp Asn Gly Ala  
85 90 95

Ser Tyr Asp Tyr Gly Asp Asn Lys Gly Phe Ser Ser Tyr Pro Ser Glu  
100 105 110

Gly Lys Gln Met Ser Gly Thr Val Pro Ser Ser Ile Pro Val Ser Tyr  
115 120 125

Gly Ser Phe Gln Gly Thr Thr Lys Lys Ile Asp Ile Pro Asn Met Arg  
130 135 140

Val Gly Val Ile Ile Gly Lys Gly Gly Glu Thr Ile Lys Tyr Leu Gln  
145 150 155 160

Leu Gln Ser Gly Ala Lys Ile Gln Val Thr Arg Asp Met Asp Ala Asp  
165 170 175

Pro Asn Cys Ala Thr Arg Thr Val Asp Leu Thr Gly Thr Pro Asp Gln  
180 185 190

Ile Ser Lys Ala Glu Gln Leu Ile Thr Asp Val Leu Gln Glu Ala Glu  
195 200 205

Ala Gly Asn Thr Ala Gly Ser Gly Gly Gly Gly Gly Arg Arg Met Gly  
210 215 220

Gly Gln Ala Gly Ala Asp Gln Phe Val Met Lys Ile Pro Asn Asn Lys  
225 230 235 240

Val Gly Leu Ile Ile Gly Lys Gly Gly Glu Thr Ile Lys Ser Met Gln  
245 250 255

Ala Lys Thr Gly Ala Arg Ile Gln Val Ile Pro Leu His Leu Pro Pro  
260 265 270

Gly Asp Pro Thr Pro Glu Arg Thr Leu Gln Ile Asp Gly Ile Thr Glu  
275 280 285

Gln Ile Glu His Ala Lys Gln Leu Val Asn Glu Ile Ile Ser Gly Glu  
290 295 300

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Asn Arg Met Arg Asn Ser Ala Met Gly Gly Tyr Pro Gln Gln Gly  
 305 310 315 320  
 Gly Tyr Gln Ala Arg Pro Pro Ser Ser Trp Ala Pro Pro Gly Gly Pro  
 325 330 335  
 Pro Ala Gln Pro Gly Tyr Gly Gly Tyr Met Gln Pro Gly Ala Tyr Pro  
 340 345 350  
 Gly Pro Pro Gln Tyr Gly Gln Ser Pro Tyr Gly Ser Tyr Pro Gln Gln  
 355 360 365  
 Thr Ser Ala Gly Tyr Tyr Asp Gln Ser Ser Val Pro Pro Ser Gln Gln  
 370 375 380  
 Ser Ala Gln Gly Glu Tyr Asp Tyr Tyr Gly Gln Gln Gln Ser Gln Gln  
 385 390 395 400  
 Pro Ser Ser Gly Gly Ser Ser Ala Pro Pro Thr Asp Thr Thr Gly Tyr  
 405 410 415  
 Asn Tyr Tyr Gln His Ala Ser Gly Tyr Gly Gln Ala Gly Gln Gly Tyr  
 420 425 430  
 Gln Gln Asp Gly Tyr Gly Ala Tyr Asn Ala Ser Gln Gln Ser Gly Tyr  
 435 440 445  
 Gly Gln Ala Ala Gly Tyr Asp Gln Gln Gly Gly Tyr Gly Ser Thr Thr  
 450 455 460  
 Asn Pro Ser Gln Glu Glu Asp Ala Ser Gln Ala Ala Pro Pro Ser Ser  
 465 470 475 480  
 Ala Gln Ser Gly Gln Ala Gly Tyr Gly Thr Thr Gly Gln Gln Pro Pro  
 485 490 495  
 Ala Gln Gly Ser Thr Gly Gln Ala Gly Tyr Gly Ala Pro Pro Thr Ser  
 500 505 510  
 Gln Ala Gly Tyr Ser Ser Gln Pro Ala Ala Ala Tyr Asn Ser Gly Tyr  
 515 520 525  
 Gly Ala Pro Pro Pro Ala Ser Lys Pro Pro Thr Tyr Gly Gln Ser Gln  
 530 535 540  
 Gln Ser Pro Gly Ala Pro Gly Ser Tyr Gly Ser Gln Ser Gly Tyr Ala  
 545 550 555 560

Gln Pro Ala Ala Ser Gly Tyr Gly Gln Pro Pro Ala Tyr Gly Tyr Gly  
                   565                                  570                                  575

Gln Ala Pro Gln Gly Tyr Gly Ser Tyr Gly Gly Tyr Thr Gln Pro Ala  
                   580                                  585                                  590

Ala Gly Gly Gly Tyr Ser Ser Asp Gly Ser Ala Gly Ala Thr Ala Gly  
                   595                                  600                                  605

Gly Gly Gly Gly Thr Pro Ala Ser Gln Ser Ala Ala Pro Pro Ala Gly  
                   610                                  615                                  620

Pro Pro Lys Ala Ser Pro Lys Ser  
 625                                  630

<210> 943

<211> 1143

<212> DNA

<213> Arabidopsis thaliana

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 gccgcctcaa ccgctaatag ttcagaccct ttcagctggg cggagctccc ggaggagctg 120  
 cttagagaaa tcctgattag ggttgagact gttgacggcg gcgattggcc gtcgcggcga 180  
 aacgtgggtg cttgtgccgg cgtttgtcgt agctggagga ttctcaccaa ggagattgta 240  
 gctgttcctg aatttcctct taaattgact ttccctatct ccctcaagca gtctgggtcca 300  
 agagattctc tagttcaatg ctttataaaa cgtaatcgaa atactcaatc gtatcatctc 360  
 tatctcggat taactacctt tttgacggat aacgggaagt ttcttcttgc tgcttctaag 420  
 ctgaagcgcg caacttgac tgattacatc atctctttgc gttcagacga tatctcaaa 480  
 agaagcaacg cgtatcttgg gagaatgaga tcgaacttcc ttggaacaaa attcacggtc 540  
 tttgatggta gtcagaccgg agcagcgaag atgcagaaga gccgctcttc taatttcac 600  
 aaagtttcac ctgaggttcc tcagggaagt taccctatcg ctacatttc atacgagtta 660  
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 agcatcgtgg agtcgcgagg agtagtagct tcaacatcca taagctcttt ttccagtcgg 780  
 tcatcaccag tctttaggtc tactcaaaa ccattgcgca gtaatagtgc atcatgtagc 840  
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catgagcagt tacgttgctg gtgcttaaat ttccatgggc gagtcacagt ggcttcggtt 960  
 aagaactttc agcttgggc agtttagtgac tgtgaagcag ggcagacatc tgagaggatc 1020  
 atactccagt ttgggaaagt tgggaaggac atgtttacca tggattatgg atatccgatt 1080  
 tctgcgtttc aagcgtttgc tatctgcctg agcagttttg aaaccagaat tgcctgtgaa 1140  
 taa 1143

<210> 944

<211> 380

<212> PRT

<213> Arabidopsis thaliana

<400> 944

Met Thr Phe Arg Ser Leu Leu Gln Glu Met Arg Ser Arg Pro His Arg  
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 20 25 30

Trp Ser Glu Leu Pro Glu Glu Leu Leu Arg Glu Ile Leu Ile Arg Val  
 35 40 45

Glu Thr Val Asp Gly Gly Asp Trp Pro Ser Arg Arg Asn Val Val Ala  
 50 55 60

Cys Ala Gly Val Cys Arg Ser Trp Arg Ile Leu Thr Lys Glu Ile Val  
 65 70 75 80

Ala Val Pro Glu Phe Ser Ser Lys Leu Thr Phe Pro Ile Ser Leu Lys  
 85 90 95

Gln Ser Gly Pro Arg Asp Ser Leu Val Gln Cys Phe Ile Lys Arg Asn  
 100 105 110

Arg Asn Thr Gln Ser Tyr His Leu Tyr Leu Gly Leu Thr Thr Ser Leu  
 115 120 125

Thr Asp Asn Gly Lys Phe Leu Leu Ala Ala Ser Lys Leu Lys Arg Ala  
 130 135 140

Thr Cys Thr Asp Tyr Ile Ile Ser Leu Arg Ser Asp Asp Ile Ser Lys  
 145 150 155 160



Arg Ser Asn Ala Tyr Leu Gly Arg Met Arg Ser Asn Phe Leu Gly Thr  
 165 170 175

Lys Phe Thr Val Phe Asp Gly Ser Gln Thr Gly Ala Ala Lys Met Gln  
 180 185 190

Lys Ser Arg Ser Ser Asn Phe Ile Lys Val Ser Pro Arg Val Pro Gln  
 195 200 205

Gly Ser Tyr Pro Ile Ala His Ile Ser Tyr Glu Leu Asn Val Leu Gly  
 210 215 220

Ser Arg Gly Pro Arg Arg Met Arg Cys Ile Met Asp Thr Ile Pro Met  
 225 230 235 240

Ser Ile Val Glu Ser Arg Gly Val Val Ala Ser Thr Ser Ile Ser Ser  
 245 250 255

Phe Ser Ser Arg Ser Ser Pro Val Phe Arg Ser His Ser Lys Pro Leu  
 260 265 270

Arg Ser Asn Ser Ala Ser Cys Ser Asp Ser Gly Asn Asn Leu Gly Asp  
 275 280 285

Pro Pro Leu Val Leu Ser Asn Lys Ala Pro Arg Trp His Glu Gln Leu  
 290 295 300

Arg Cys Trp Cys Leu Asn Phe His Gly Arg Val Thr Val Ala Ser Val  
 305 310 315 320

Lys Asn Phe Gln Leu Val Ala Val Ser Asp Cys Glu Ala Gly Gln Thr  
 325 330 335

Ser Glu Arg Ile Leu Gln Phe Gly Lys Val Gly Lys Asp Met Phe  
 340 345 350

Thr Met Asp Tyr Gly Tyr Pro Ile Ser Ala Phe Gln Ala Phe Ala Ile  
 355 360 365

Cys Leu Ser Ser Phe Glu Thr Arg Ile Ala Cys Glu  
 370 375 380

<210> 945

<211> 942

<212> DNA

<213> Arabidopsis thaliana

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aatcctctct tcaacgccaa cacgaacaac acaaaccta atatattctc tgctctcaat 180
tcgtttcgtg atcaagctaa gcaagcttta gattctagaa tctctcgatt caattctggt 240
aaggcacctg tctggcgagc aatttctgac gacggtggtg gtgcgagggc tcaggtgacg 300
gttcgcatc gcggaagcgg gaaaggatta tctgctgatg ctattgagga gagattggcg 360
ggagtccctg tttacgcgtt gagtaattcg aatgaggagt ttgtgttggt ttcagggact 420
tcctctggga aatctctggg tttgttgttt tgtaaaaggg aagatgcaga gactcttctt 480
aaagagatga agagtatgga tcctcgtatg aggaaagaag gttcaaaagt tgttgccttt 540
gctcttagca aggtgttcca gttaaaagt aatggtgtgg catttaggtt gattcctgag 600
tctactcaag tgaaaaatgc cttgaaggaa aggaaaacag ctggtatcga tgatgatgac 660
ttccatggtg ttccggtttt ccagtcaaag agcttgattc tacgaagtga aaacatgagt 720
tatcgccctg ttttctttag aaaggaggac ttggaaaaat ctctaatacg agcgtccagc 780
caacagaacc gacttaacct tgctctgaaa ccaggcgata ttcaggttgc agttttcgaa 840
gatattgtca agggaatgag ggaagcacg acgtcaaact gggacgacat tgtgtttata 900
ccgcctggtt ttgaggtttc aactgagcaa acacaggagt aa 942

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<210> 946

<211> 313

<212> PRT

<213> *Arabidopsis thaliana*

<400> 946

Met Asn Ser Asn Ile Phe Pro Pro Ser Lys Gln Gln Asn Glu Leu Asn  
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Asn Ile Gln Gln Ser Phe Ser Asn Leu Gln Ser Gln Cys Ser Asn Leu  
20 25 30

Leu Leu Asn Val Ser Gln Thr Leu Asn Pro Leu Phe Asn Ala Asn Thr  
35 40 45

Asn Asn Asn Lys Pro Asn Ile Phe Ser Ala Leu Asn Ser Phe Arg Asp  
50 55 60

Gln Ala Lys Gln Ala Leu Asp Ser Arg Ile Ser Arg Phe Asn Ser Gly  
 65 70 75 80  
 Lys Ala Pro Val Trp Ala Arg Ile Ser Asp Asp Gly Gly Gly Ala Arg  
 85 90 95  
 Ala Gln Val Thr Val Pro Ile Arg Gly Ser Gly Lys Gly Leu Ser Ala  
 100 105 110  
 Asp Ala Ile Glu Glu Arg Leu Ala Gly Val Pro Val Tyr Ala Leu Ser  
 115 120 125  
 Asn Ser Asn Glu Glu Phe Val Leu Val Ser Gly Thr Ser Ser Gly Lys  
 130 135 140  
 Ser Leu Gly Leu Leu Phe Cys Lys Glu Glu Asp Ala Glu Thr Leu Leu  
 145 150 155 160  
 Lys Glu Met Lys Ser Met Asp Pro Arg Met Arg Lys Glu Gly Ser Lys  
 165 170 175  
 Val Val Ala Leu Ala Leu Ser Lys Val Phe Gln Leu Lys Val Asn Gly  
 180 185 190  
 Val Ala Phe Arg Leu Ile Pro Glu Ser Thr Gln Val Lys Asn Ala Leu  
 195 200 205  
 Lys Glu Arg Lys Thr Ala Gly Ile Asp Asp Asp Asp Phe His Gly Val  
 210 215 220  
 Pro Val Phe Gln Ser Lys Ser Leu Ile Leu Arg Ser Glu Asn Met Ser  
 225 230 235 240  
 Tyr Arg Pro Val Phe Phe Arg Lys Glu Asp Leu Glu Lys Ser Leu Ile  
 245 250 255  
 Arg Ala Ser Ser Gln Gln Asn Arg Leu Asn Pro Ala Leu Lys Pro Gly  
 260 265 270  
 Asp Ile Gln Val Ala Val Phe Glu Asp Ile Val Lys Gly Met Arg Glu  
 275 280 285  
 Ser Thr Thr Ser Asn Trp Asp Asp Ile Val Phe Ile Pro Pro Gly Phe  
 290 295 300  
 Glu Val Ser Thr Glu Gln Thr Gln Glu

305

310

&lt;210&gt; 947

&lt;211&gt; 624

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 947

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ttgaagagat ggaaaacgaa tcgtgtgcaa cagatctacg cttgtaagct cgtcgaagct    180
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aatcggatta agttaccggc ggttgagaga aaactgaaga ttcttgccg tttggttcct    480
ggttgccgga aagtctctgt accgaatctt ttagatgaag cgaccgatta catcgacgag    540
ttagagatgc aggttcgagc catggaggct ctgccgaac ttttaaccgc agccgcacca    600
cggacgacgt tgaccggaac ttaa                                           624

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&lt;210&gt; 948

&lt;211&gt; 207

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 948

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Met Val Glu Ser Leu Phe Pro Ser Ile Glu Asn Thr Gly Glu Ser Ser
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Arg Arg Lys Lys Pro Arg Ile Ser Glu Thr Ala Glu Ala Glu Ile Glu
 20             25             30

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Ala Arg Arg Val Asn Glu Glu Ser Leu Lys Arg Trp Lys Thr Asn Arg
 35             40             45

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Val Gln Gln Ile Tyr Ala Cys Lys Leu Val Glu Ala Leu Arg Arg Val
 50             55             60

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Arg Gln Arg Ser Ser Thr Thr Ser Asn Asn Glu Thr Asp Lys Leu Val  
 65 70 75 80  
 Ser Gly Ala Ala Arg Glu Ile Arg Asp Thr Ala Asp Arg Val Leu Ala  
 85 90 95  
 Ala Ser Ala Arg Gly Thr Thr Arg Trp Ser Arg Ala Ile Leu Ala Ser  
 100 105 110  
 Arg Val Arg Ala Lys Leu Lys Lys His Arg Lys Ala Lys Lys Ser Thr  
 115 120 125  
 Gly Asn Cys Lys Ser Arg Lys Gly Leu Thr Glu Thr Asn Arg Ile Lys  
 130 135 140  
 Leu Pro Ala Val Glu Arg Lys Leu Lys Ile Leu Gly Arg Leu Val Pro  
 145 150 155 160  
 Gly Cys Arg Lys Val Ser Val Pro Asn Leu Leu Asp Glu Ala Thr Asp  
 165 170 175  
 Tyr Ile Ala Ala Leu Glu Met Gln Val Arg Ala Met Glu Ala Leu Ala  
 180 185 190  
 Glu Leu Leu Thr Ala Ala Ala Pro Arg Thr Thr Leu Thr Gly Thr  
 195 200 205

&lt;210&gt; 949

&lt;211&gt; 531

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 949

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 aaagacgaca aagagctgga gaatggccag aggttttcgc cggagctcaa aagcccatc 180  
 gaggtgtcaa gattcgccgt cgttgtgttc tcagagaact atgctgcgtc ttcttggtgt 240  
 ctcgatgagc tcgtaacgat catggatttc gaaaaaagg gttccatcac cgtgatgccc 300  
 atcttctacg gcgtggaacc gaatcatgtg aggtggcaga ccgagtgact cgctgaacag 360  
 tttagaagaac atgcgagtag agaagatcct gagaaagttc ttaaatggag gcaagcattg 420

accaaattttg cgcaactctc cggcgattgt tcagggtgatg atgactcgaa gctggtggac 480  
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<210> 950

<211> 176

<212> PRT

<213> Arabidopsis thaliana

<400> 950

Met Ser Ser His Thr Ala Thr Lys Tyr Asp Val Phe Leu Ser Phe Arg  
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Gly His Asp Thr Arg His Asn Phe Ile Ser Phe Leu Tyr Lys Glu Leu  
 20 25 30

Val Arg Arg Ser Ile Arg Thr Phe Lys Asp Asp Lys Glu Leu Glu Asn  
 35 40 45

Gly Gln Arg Phe Ser Pro Glu Leu Lys Ser Pro Ile Glu Val Ser Arg  
 50 55 60

Phe Ala Val Val Val Val Ser Glu Asn Tyr Ala Ala Ser Ser Trp Cys  
 65 70 75 80

Leu Asp Glu Leu Val Thr Ile Met Asp Phe Glu Lys Lys Gly Ser Ile  
 85 90 95

Thr Val Met Pro Ile Phe Tyr Gly Val Glu Pro Asn His Val Arg Trp  
 100 105 110

Gln Thr Gly Val Leu Ala Glu Gln Phe Lys Lys His Ala Ser Arg Glu  
 115 120 125

Asp Pro Glu Lys Val Leu Lys Trp Arg Gln Ala Leu Thr Asn Phe Ala  
 130 135 140

Gln Leu Ser Gly Asp Cys Ser Gly Asp Asp Asp Ser Lys Leu Val Asp  
 145 150 155 160

Lys Ile Ala Asn Glu Ile Ser Asn Lys Lys Thr Ile Tyr Ala Thr Ile  
 165 170 175

<210> 951

&lt;211&gt; 1407

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 951

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gtttctcatt catggttggt tgtatttgca cccttggtgt ttttcacgc tgtgattgct    180
cgtggtagat ttccattgcc tgctccatca atgcctcatg atcgacattg ggctcctttt    240
cactcggtta tggcaacacc acttcttggt gcttttgaga tccttctctg tgtacatctt    300
gaagataaat atgttggtga cttaaagatt gtctttctac cgttgcttgc atttgaggta    360
gcaattttga tagataatgt cagaatgtgc aggacgctca tgcttgagaga tgaagaaact    420
atgagtgatg aagccatatg ggaacacact cctcatttct gggtttccat atctatgggt    480
ttcttcattg ccgcaacaac ctccactctt cttaaattat gtggtgacgt agctgcgttg    540
ggatggtggg acttatttat aaacttcgga atagcagagt gctttgcgtt tcttgctctgt    600
acaaagtgga gcaatcagtc aattcatagg tattcacata taccggaacc tagctcatct    660
tcaatggtag taagatatct ggattggaac agaggtctag tagtaaccgc tgacgacgag    720
catcagcaaa gcaacagaat atgtggtctc caagatattg gtggacatgt tatgaaaatt    780
ccatttgtag cctttcaaat catccttttc atgcgcttag agggaaacgcc agcttctgcc    840
aaaaacattc cgattttagt tctgtttgta cctctttttc tgttacaagg agctggggta    900
ctttttgcta tgtatagatt ggttgagaaa tcagctctat taataaatag tggtagtggt    960
tcttatggaa gatattttac cgcaacatca tcagctcgtg aattcctggg attctttcaa   1020
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acagatatca ccagttatag ccagcaagag tacgaaaggc ttcaaaacga gaagattctt   1260
tgtagagttt gctttgaaga tccgatcaac gtggttctac tccatgtag acatcacgtc   1320
ctctgcagta catgctgcga gaaatgcaag aaatgtccga ttgtcgtgt cctgatcgag   1380
gagcgtatgc ctgtatacga tgtgtag                                     1407

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&lt;210&gt; 952

&lt;211&gt; 468

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 952

Met Leu Val Gln Arg Arg Val Met Ser Trp Arg Arg Val Trp Lys Ser  
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 Phe Gln Ala Ala Ser Ala His Cys Leu Leu Phe Ser Phe Thr Leu Leu  
 20 25 30  
 Leu Ala Leu Lys Leu Asp His Val Val Ser His Ser Trp Trp Phe Val  
 35 40 45  
 Phe Ala Pro Leu Trp Leu Phe His Ala Val Ile Ala Arg Gly Arg Phe  
 50 55 60  
 Ser Leu Pro Ala Pro Ser Met Pro His Asp Arg His Trp Ala Pro Phe  
 65 70 75 80  
 His Ser Val Met Ala Thr Pro Leu Leu Val Ala Phe Glu Ile Leu Leu  
 85 90 95  
 Cys Val His Leu Glu Asp Lys Tyr Val Val Asp Leu Lys Ile Val Phe  
 100 105 110  
 Leu Pro Leu Leu Ala Phe Glu Val Ala Ile Leu Ile Asp Asn Val Arg  
 115 120 125  
 Met Cys Arg Thr Leu Met Pro Gly Asp Glu Glu Thr Met Ser Asp Glu  
 130 135 140  
 Ala Ile Trp Glu Thr Leu Pro His Phe Trp Val Ser Ile Ser Met Val  
 145 150 155 160  
 Phe Phe Ile Ala Ala Thr Thr Phe Thr Leu Leu Lys Leu Cys Gly Asp  
 165 170 175  
 Val Ala Ala Leu Gly Trp Trp Asp Leu Phe Ile Asn Phe Gly Ile Ala  
 180 185 190  
 Glu Cys Phe Ala Phe Leu Val Cys Thr Lys Trp Ser Asn Gln Ser Ile  
 195 200 205  
 His Arg Tyr Ser His Ile Pro Glu Pro Ser Ser Ser Ser Met Val Val  
 210 215 220



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Arg Tyr Leu Asp Trp Asn Arg Gly Leu Val Val Thr Ala Asp Asp Glu  
 225 230 235 240  
 His Gln Gln Ser Asn Arg Ile Cys Gly Leu Gln Asp Ile Gly Gly His  
 245 250 255  
 Val Met Lys Ile Pro Phe Val Thr Phe Gln Ile Ile Leu Phe Met Arg  
 260 265 270  
 Leu Glu Gly Thr Pro Ala Ser Ala Lys Asn Ile Pro Ile Leu Val Leu  
 275 280 285  
 Phe Val Pro Leu Phe Leu Leu Gln Gly Ala Gly Val Leu Phe Ala Met  
 290 295 300  
 Tyr Arg Leu Val Glu Lys Ser Val Leu Leu Ile Asn Ser Gly Ser Gly  
 305 310 315 320  
 Ser Tyr Gly Arg Tyr Phe Thr Ala Thr Ser Ser Ala Arg Glu Phe Leu  
 325 330 335  
 Gly Phe Phe Gln His Gly Ala Arg Leu Leu Gly Trp Trp Ser Ile Asp  
 340 345 350  
 Glu Gly Ser Arg Glu Glu Gln Ala Arg Leu Tyr Ser Gly Glu Ala Thr  
 355 360 365  
 Gly Tyr Asn Thr Phe Ser Pro Glu Val Val Lys Lys Met Pro Lys Ser  
 370 375 380  
 Asp Leu Val Glu Glu Ile Trp Arg Leu Gln Ala Ala Leu Ser Glu Gln  
 385 390 395 400  
 Thr Asp Ile Thr Ser Tyr Ser Gln Gln Glu Tyr Glu Arg Leu Gln Asn  
 405 410 415  
 Glu Lys Ile Leu Cys Arg Val Cys Phe Glu Asp Pro Ile Asn Val Val  
 420 425 430  
 Leu Leu Pro Cys Arg His His Val Leu Cys Ser Thr Cys Cys Glu Lys  
 435 440 445  
 Cys Lys Lys Cys Pro Ile Cys Arg Val Leu Ile Glu Glu Arg Met Pro  
 450 455 460  
 Val Tyr Asp Val  
 465

&lt;210&gt; 953

&lt;211&gt; 504

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 953

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aagaacggat caagccctta tgctatagct aagaagatag aggagaaaca caagtcttta      180
cttcagaga gtttcgtaa aacactttct ctacagctta aaaactctgt tgctaaaggt      240
aagctcgtga agatcagagc ctcttacaag ctctcagata ccaccaagat gataacgagg      300
cagcaggaca agaagaataa gaagaatatg aagcaagaag ataaagagat cacaagaagg      360
actaggtctt cttcgacaag gcctaagaag actgtgtctg tgaacaaaca agaaaaagag      420
aggaaagtga agaaggcgag acagcctaag tctatcaaat cttcagttgg taagaagaag      480
gccatgaaag cttccgctgc ttga                                         504

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&lt;210&gt; 954

&lt;211&gt; 167

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 954

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Met Ala Glu Asp Lys Ile Leu Lys Lys Thr Pro Ala Ala Lys Lys Pro
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Arg Lys Pro Lys Thr Thr Thr His Pro Pro Tyr Phe Gln Met Ile Lys
20          25          30
Glu Ala Leu Met Val Leu Lys Glu Lys Asn Gly Ser Ser Pro Tyr Ala
35          40          45
Ile Ala Lys Lys Ile Glu Glu Lys His Lys Ser Leu Leu Pro Glu Ser
50          55          60
Phe Arg Lys Thr Leu Ser Leu Gln Leu Lys Asn Ser Val Ala Lys Gly
65          70          75          80

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Lys Leu Val Lys Ile Arg Ala Ser Tyr Lys Leu Ser Asp Thr Thr Lys  
 85 90 95

Met Ile Thr Arg Gln Gln Asp Lys Lys Asn Lys Lys Asn Met Lys Gln  
 100 105 110

Glu Asp Lys Glu Ile Thr Lys Arg Thr Arg Ser Ser Ser Thr Arg Pro  
 115 120 125

Lys Lys Thr Val Ser Val Asn Lys Gln Glu Lys Lys Arg Lys Val Lys  
 130 135 140

Lys Ala Arg Gln Pro Lys Ser Ile Lys Ser Ser Val Gly Lys Lys Lys  
 145 150 155 160

Ala Met Lys Ala Ser Ala Ala  
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<210> 955

<211> 1077

<212> DNA

<213> Arabidopsis thaliana

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 agacgtcttg aagaggagat ggctaagatg atgggggaaag aggctgctct gttcgtgcc 180  
 tccgggacaa tggggaatct gatcagcgtg atgggttact gcgacgtgag aggcagcgag 240  
 gtgattcttg gcgacaattg tcacatccat gtttacgaga atggagggat atcgactatc 300  
 gggggagtgc atcctaagac agtcaagaat gaagaagacg ggaccatgga cttggaggcc 360  
 attgaagcag ctattagaga tcctaaagga agcagctttt atccatcaac aaggttgatt 420  
 tgcttgagga acacacatgc caactctggt gggagatggt tgagcgtgga atactactgag 480  
 aaagtgggag agattgcgaa gagacatggc gtgaagctcc atatcgacgg agcccgtctt 540  
 ttcaatgctt ccattgcact tggagttcca gtccataagc ttgttaaggc tgcggactcc 600  
 gttcaggtgt gtctctctaa aggtcttgga gtcctcgtag gatctgtaat cgttggttcg 660  
 caaagcttca tagagaaggc gaaaacggtt aggaaaacat taggtggagg aatgagacaa 720  
 atagggttgc tgtgcgcagc cgctttggtc gactccaag aaaacctccc aaagctacaa 780  
 catgaccaca agaaggctaa gttgttagct gaagggttga atcaaatgaa agggattaga 840

gtaaatgttg cagccgtgga gaccaacatg attttcatgg atatggagga tggttcaaga 900  
 cttacggctg agaaactgcg gaagaatcta gaggagaatg gcattctcct tatccgggga 960  
 aactcatccc ggatcagaat agttatacac caccagataa caacaagtga tgtgcattac 1020  
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<210> 956

<211> 358

<212> PRT

<213> Arabidopsis thaliana

<400> 956

Met Val Met Arg Ser Val Asp Leu Arg Ser Asp Thr Val Thr Arg Pro  
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Thr Asp Ala Met Arg Glu Ala Met Cys Asn Ala Glu Val Asp Asp Asp  
 20 25 30

Val Leu Gly Tyr Asp Pro Thr Ala Arg Arg Leu Glu Glu Glu Met Ala  
 35 40 45

Lys Met Met Gly Lys Glu Ala Ala Leu Phe Val Pro Ser Gly Thr Met  
 50 55 60

Gly Asn Leu Ile Ser Val Met Val His Cys Asp Val Arg Gly Ser Glu  
 65 70 75 80

Val Ile Leu Gly Asp Asn Cys His Ile His Val Tyr Glu Asn Gly Gly  
 85 90 95

Ile Ser Thr Ile Gly Gly Val His Pro Lys Thr Val Lys Asn Glu Glu  
 100 105 110

Asp Gly Thr Met Asp Leu Glu Ala Ile Glu Ala Ala Ile Arg Asp Pro  
 115 120 125

Lys Gly Ser Thr Phe Tyr Pro Ser Thr Arg Leu Ile Cys Leu Glu Asn  
 130 135 140

Thr His Ala Asn Ser Gly Gly Arg Cys Leu Ser Val Glu Tyr Thr Glu  
 145 150 155 160

Lys Val Gly Glu Ile Ala Lys Arg His Gly Val Lys Leu His Ile Asp  
 165 170 175

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Gly Ala Arg Leu Phe Asn Ala Ser Ile Ala Leu Gly Val Pro Val His  
180 185 190

Lys Leu Val Lys Ala Ala Asp Ser Val Gln Val Cys Leu Ser Lys Gly  
195 200 205

Leu Gly Ala Pro Val Gly Ser Val Ile Val Gly Ser Gln Ser Phe Ile  
210 215 220

Glu Lys Ala Lys Thr Val Arg Lys Thr Leu Gly Gly Gly Met Arg Gln  
225 230 235 240

Ile Gly Val Leu Cys Ala Ala Ala Leu Val Ala Leu Gln Glu Asn Leu  
245 250 255

Pro Lys Leu Gln His Asp His Lys Lys Ala Lys Leu Leu Ala Glu Gly  
260 265 270

Leu Asn Gln Met Lys Gly Ile Arg Val Asn Val Ala Ala Val Glu Thr  
275 280 285

Asn Met Ile Phe Met Asp Met Glu Asp Gly Ser Arg Leu Thr Ala Glu  
290 295 300

Lys Leu Arg Lys Asn Leu Glu Glu Asn Gly Ile Leu Leu Ile Arg Gly  
305 310 315 320

Asn Ser Ser Arg Ile Arg Ile Val Ile His His Gln Ile Thr Thr Ser  
325 330 335

Asp Val His Tyr Thr Leu Ser Cys Phe Gln Gln Ala Met Leu Thr Met  
340 345 350

Gln Glu Pro Ser Arg Thr  
355

<210> 957

<211> 1233

<212> DNA

<213> Arabidopsis thaliana

<400> 957  
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caccatctca	agactttgaa	gaccagtggt	gttctttcta	tggttaagaa	atcttataaaa	180
attgctggtt	cttctactcc	tcttgctagt	gtagctgttg	ctgctgctgc	cgccgctcaa	240
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tctcaaccac	aaccactaca	gcaacttcca	ccgaccaatc	aagtccaggc	taacggacag	420
ccaatctggg	aacagcagca	agttcaatca	cctgttccgg	ttccgactcc	ggttacagag	480
tcggcgaaga	gaggacctgg	tcgtccaagg	aagaacggtt	ctgctgctcc	tgctactgca	540
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cgctcgagctg	ctgggagaca	gaggaagccc	aaatccgttt	cttctactgc	ctctgtgtat	660
ccttatgttg	ctaattggtc	tagacgcaga	ggaaggccta	ggagagtgtg	tgaccctagc	720
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gccataaaag	atctggaagc	actaacagtg	acggagaccg	ttgagccaca	agttatggaa	1080
gaagtgcagc	cagaggagac	tgcacacca	cagactgaag	ctcaacaaac	tgaagctgct	1140
gagacacaag	gaggacaaga	agaaggacaa	gaaagagaag	gagaaacaca	gaccagacac	1200
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&lt;210&gt; 958

&lt;211&gt; 410

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 958

Met Ile Cys Ala Ala Ile Ala Ala Leu Asn Glu Pro Asp Gly Ser Ser  
 1 5 10 15

Lys Met Ala Ile Ser Arg Tyr Ile Glu Arg Cys Tyr Thr Gly Leu Thr  
 20 25 30

Ser Ala His Ala Ala Leu Leu Thr His His Leu Lys Thr Leu Lys Thr  
 35 40 45

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Ser Gly Val Leu Ser Met Val Lys Lys Ser Tyr Lys Ile Ala Gly Ser  
50 55 60

Ser Thr Pro Pro Ala Ser Val Ala Val Ala Ala Ala Ala Ala Gln  
65 70 75 80

Gly Leu Asp Val Pro Arg Ser Glu Ile Leu His Ser Ser Asn Asn Asp  
85 90 95

Pro Met Ala Ser Gly Ser Ala Ser Gln Pro Leu Lys Arg Gly Arg Gly  
100 105 110

Arg Pro Pro Lys Pro Lys Pro Glu Ser Gln Pro Gln Pro Leu Gln Gln  
115 120 125

Leu Pro Pro Thr Asn Gln Val Gln Ala Asn Gly Gln Pro Ile Trp Glu  
130 135 140

Gln Gln Gln Val Gln Ser Pro Val Pro Val Pro Thr Pro Val Thr Glu  
145 150 155 160

Ser Ala Lys Arg Gly Pro Gly Arg Pro Arg Lys Asn Gly Ser Ala Ala  
165 170 175

Pro Ala Thr Ala Pro Ile Val Gln Ala Ser Val Met Ala Gly Ile Met  
180 185 190

Lys Arg Arg Gly Arg Pro Pro Gly Arg Arg Ala Ala Gly Arg Gln Arg  
195 200 205

Lys Pro Lys Ser Val Ser Ser Thr Ala Ser Val Tyr Pro Tyr Val Ala  
210 215 220

Asn Gly Ala Arg Arg Arg Gly Arg Pro Arg Arg Val Val Asp Pro Ser  
225 230 235 240

Ser Ile Val Ser Val Ala Pro Val Gly Gly Glu Asn Val Ala Ala Val  
245 250 255

Ala Pro Gly Met Lys Arg Gly Arg Gly Arg Pro Pro Lys Ile Gly Gly  
260 265 270

Val Ile Ser Arg Leu Ile Met Lys Pro Lys Arg Gly Arg Gly Arg Pro  
275 280 285

Val Gly Arg Pro Arg Lys Ile Gly Thr Ser Val Thr Thr Gly Thr Gln

290

295

300

Asp Ser Gly Glu Leu Lys Lys Lys Phe Asp Ile Phe Gln Glu Lys Val  
305 310 315 320

Lys Glu Ile Val Lys Val Leu Lys Asp Gly Val Thr Ser Glu Asn Gln  
325 330 335

Ala Val Val Gln Ala Ile Lys Asp Leu Glu Ala Leu Thr Val Thr Glu  
340 345 350

Thr Val Glu Pro Gln Val Met Glu Glu Val Gln Pro Glu Glu Thr Ala  
355 360 365

Ala Pro Gln Thr Glu Ala Gln Gln Thr Glu Ala Ala Glu Thr Gln Gly  
370 375 380

Gly Gln Glu Glu Gly Gln Glu Arg Glu Gly Glu Thr Gln Thr Gln Thr  
385 390 395 400

Glu Ala Glu Ala Met Gln Glu Ala Leu Phe  
405 410

&lt;210&gt; 959

&lt;211&gt; 2373

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 959

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ccgtatttgc	tcttgccctc	atattctgcg	gatgatccaa	gaatactata	ttctagtgggt	960
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&lt;210&gt; 960

&lt;211&gt; 790

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 960

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Ile Pro Ser Ala Lys Pro Val Ala Asn Val His Arg Gln Arg Cys Arg  
 20 25 30

Ser Val Phe Lys Leu Leu Val Gln Arg Glu Ile Ser Pro Asn Thr Lys  
 35 40 45

Phe Val Pro Arg Lys Arg Trp Gly Glu Ser Arg Cys Asp Ala Asp Ser  
 50 55 60

Ser Cys Gly Thr Thr Ser Glu Pro Val Arg Glu Gln Gly Leu Asn Leu  
 65 70 75 80

Ile Ser Trp Val Glu Ala Glu Ser Leu Gln His Leu Ser Ala Lys Tyr  
 85 90 95

Cys Pro Leu Val Pro Pro Pro Arg Ser Thr Ile Ala Ala Ala Phe Ser  
 100 105 110

Ser Asp Gly Arg Thr Leu Ala Ser Thr His Gly Asp His Thr Val Lys  
 115 120 125

Ile Ile Asp Cys Glu Thr Gly Lys Cys Leu Lys Ile Leu Thr Gly His  
 130 135 140

Arg Arg Thr Pro Trp Val Val Arg Phe His Pro Arg His Ser Glu Ile  
 145 150 155 160

Val Ala Ser Gly Ser Leu Asp His Glu Val Arg Leu Trp Asn Ala Lys  
 165 170 175

Thr Gly Glu Cys Ile Arg Thr His Asp Phe Tyr Arg Pro Ile Ala Ser  
 180 185 190

Ile Ala Phe His Ala Gly Gly Glu Leu Leu Ala Val Ala Ser Gly His  
 195 200 205

Lys Leu His Ile Trp His Tyr Asn Lys Gly Gly Asp Asp Ser Ala Pro  
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Ala Ile Val Leu Lys Thr Arg Arg Ser Leu Arg Ala Val His Phe His  
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Pro His Gly Val Pro Leu Leu Leu Thr Ala Glu Val Thr Asp Ile Asp  
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Ser Ser Asp Ser Ala Met Thr Arg Ser Thr Ser Pro Gly Tyr Leu Arg  
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Tyr Pro Pro Pro Ala Ile Phe Phe Thr Asn Thr Gln Ser Gly Ser Arg  
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Thr Ser Leu Ala Ala Glu Leu Pro Leu Val Pro Leu Pro Tyr Leu Leu  
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Leu Pro Ser Tyr Ser Ala Asp Asp Pro Arg Ile Leu Tyr Ser Ser Gly  
 305 310 315 320

Thr Thr Gly Pro Arg Asn Ala Gln Thr Arg Phe Gln Ser Asn Gln Ser  
 325 330 335

Ser Val Glu His Gly Ser Arg Thr Ile Ser Pro Ser Pro Leu Pro Met  
 340 345 350

Ala Thr Ser Ala Asp Leu Ser Gly Ser Tyr His Val Pro Asp Asn Ser  
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Ala Ser Asn Thr Phe Ala Thr Gln Ala Gly Ala Arg Asn Ser Thr Thr  
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Ala Val Asp Ala Met Asp Val Asp Glu Ala Gln Pro Val Gly Arg Asn  
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Arg Val Pro Ser Gln Val Ser Ser Gln Pro Asp Leu Leu Glu Phe Gly  
 405 410 415

Gln Leu Gln Gln Leu Phe His Phe Arg Asp Arg Gly Ser Trp Glu Leu  
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Pro Phe Leu Gln Gly Trp Leu Met Ala Gln Ser Gln Ala Gly Ala Asn  
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Ser Val Ala Leu Pro Thr Gly Ser Ser Gly His Val Asn Ser Thr Pro  
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Tyr Met Gly Ser Ser Ser Ala Ser His Ser Ser Thr Ala Ser Leu Glu

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 Lys Cys Arg Leu Thr Ile His His Ala Val Leu Cys Ser Glu Met Gly  
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Met Glu Leu Val Arg Val Leu Pro Ser Ser Glu Asp Glu Val Asn Val  
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Ala Cys Phe His Pro Ser Pro Gly Gly Gly Leu Val Tyr Gly Thr Lys  
740 745 750

Glu Gly Lys Leu Arg Ile Phe Arg Tyr Asn Thr Ala Ala Ala Ser Asn  
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<213> Arabidopsis thaliana

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gataaactct ctctcccaca agaagtgact ctgtatactg atgaagatga atggcttagc 240  
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<210> 962

<211> 209

<212> PRT

<213> Arabidopsis thaliana

&lt;400&gt; 962

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 35 40 45

Arg Ala Val Val Thr Lys Ser Ser Leu His Phe Leu Asp Lys Leu Ser  
 50 55 60

Leu Pro Gln Glu Val Thr Leu Tyr Thr Asp Glu Asp Glu Trp Ser Ser  
 65 70 75 80

Trp Asn Lys Ile Gly Asp Pro Val Leu His Ile Glu Leu Arg Arg Trp  
 85 90 95

Ala Asp Val Leu Val Ile Ala Pro Leu Ser Ala Asn Thr Leu Gly Lys  
 100 105 110

Ile Ala Gly Gly Leu Cys Asp Asn Leu Leu Thr Cys Ile Ile Arg Ala  
 115 120 125

Trp Asp Tyr Thr Lys Pro Leu Phe Val Ala Pro Ala Met Asn Thr Leu  
 130 135 140

Met Trp Asn Asn Pro Phe Thr Glu Arg His Leu Leu Ser Leu Asp Glu  
 145 150 155 160

Leu Gly Ile Thr Leu Ile Pro Pro Ile Lys Lys Arg Leu Ala Cys Gly  
 165 170 175

Asp Tyr Gly Asn Gly Ala Met Ala Glu Pro Ser Leu Ile Tyr Ser Thr  
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Val Arg Leu Phe Trp Glu Ser Gln Ala His Gln Gln Thr Gly Gly Thr  
 195 200 205

Ser

&lt;210&gt; 963

&lt;211&gt; 918

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 963

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tccgtaatcg tcgatttcat cactcgcgta aactccaaag acgttgcatc ttccgccgca   240
gttccttcgg ttgcttcgtg gtggaagacg acggagaaat acaaaggtag ctcttcaaca   300
ctcgtcgtcg ggaacagct tctactcgag aactatcctc tcggaaaatc tctcaaaaat   360
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&lt;210&gt; 964

&lt;211&gt; 305

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 964

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Met Lys Tyr His Asn Gly Val Leu Leu Lys Gly Asn Ile Thr Val Asn
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Leu Val Trp Tyr Gly Lys Phe Thr Pro Ile Gln Arg Ser Val Ile Val  
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 Gly Ser Ser Thr Leu Val Val Gly Lys Gln Leu Leu Leu Glu Asn Tyr  
 100 105 110  
 Pro Leu Gly Lys Ser Leu Lys Asn Pro Tyr Leu Arg Ala Leu Ser Thr  
 115 120 125  
 Lys Leu Asn Gly Gly Leu Arg Ser Ile Thr Val Val Leu Thr Ala Lys  
 130 135 140  
 Asp Val Thr Val Glu Arg Phe Cys Met Ser Arg Cys Gly Thr His Gly  
 145 150 155 160  
 Ser Ser Gly Ser Asn Pro Arg Arg Ala Ala Asn Gly Ala Ala Tyr Val  
 165 170 175  
 Trp Val Gly Asn Ser Glu Thr Gln Cys Pro Gly Tyr Cys Ala Trp Pro  
 180 185 190  
 Phe His Gln Pro Ile Tyr Gly Pro Gln Thr Pro Pro Leu Val Ala Pro  
 195 200 205  
 Asn Gly Asp Val Gly Val Asp Gly Met Ile Ile Asn Leu Ala Thr Leu  
 210 215 220  
 Leu Ala Asn Thr Val Thr Asn Pro Phe Asn Asn Gly Tyr Tyr Gln Gly  
 225 230 235 240  
 Pro Pro Thr Ala Pro Leu Glu Ala Val Ser Ala Cys Pro Gly Ile Phe  
 245 250 255  
 Gly Ser Gly Ser Tyr Pro Gly Tyr Ala Gly Arg Val Leu Val Asp Lys  
 260 265 270  
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val  
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<210> 965

<211> 3438

<212> DNA

<213> *Arabidopsis thaliana*

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<212> PRT

<213> Arabidopsis thaliana

<400> 966

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Arg Gln Ser Arg Phe Leu Cys His Val Ala Lys Glu Asp Gly Ser Leu  
 35 40 45

Thr Leu Ala Ser Leu Asp Leu Gly Asn Lys Pro Arg Lys Phe Gly Lys  
 50 55 60

Gly Lys Ala Met Lys Leu Glu Gly Ser Phe Val Thr Glu Met Gly Gln  
 65 70 75 80

Gly Lys Val Arg Ala Val Lys Asn Asp Lys Met Lys Val Val Lys Glu  
 85 90 95

Lys Lys Pro Ala Glu Ile Val Ser Pro Leu Phe Ser Ala Lys Ser Phe  
 100 105 110

Glu Glu Leu Gly Leu Pro Asp Ser Leu Leu Asp Ser Leu Glu Arg Glu  
 115 120 125

Gly Phe Ser Val Pro Thr Asp Val Gln Ser Ala Ala Val Pro Ala Ile  
 130 135 140

Ile Lys Gly His Asp Ala Val Ile Gln Ser Tyr Thr Gly Ser Gly Lys  
 145 150 155 160

Thr Leu Ala Tyr Leu Leu Pro Ile Leu Ser Glu Ile Gly Pro Leu Ala  
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Glu Lys Ser Arg Ser Ser His Ser Glu Asn Asp Lys Arg Thr Glu Ile  
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 Gln Leu Val Gly Gly Ala Asn Arg Met Arg Gln Glu Glu Ala Leu Lys  
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 Lys Asn Lys Pro Ala Ile Val Val Gly Thr Pro Gly Arg Ile Ala Glu  
 245 250 255  
 Ile Ser Lys Gly Gly Lys Leu His Thr His Gly Cys Arg Phe Leu Val  
 260 265 270  
 Leu Asp Glu Val Asp Glu Leu Leu Ser Phe Asn Phe Arg Glu Asp Ile  
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 His Arg Ile Leu Glu His Val Gly Lys Arg Ser Gly Ala Gly Pro Lys  
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 Pro Ser Ala Pro Val Met Ser Leu Thr Pro Thr Thr Ser Glu Ala Asp  
 355 360 365  
 Gly Gln Ile Gln Thr Thr Ile Gln Ser Leu Pro Pro Ala Leu Lys His  
 370 375 380  
 Tyr Tyr Cys Ile Ser Lys His Gln His Lys Val Asp Thr Leu Arg Arg  
 385 390 395 400  
 Cys Val His Ala Leu Asp Ala Gln Ser Val Ile Ala Phe Met Asn His  
 405 410 415  
 Ser Arg Gln Leu Lys Asp Val Val Tyr Lys Leu Glu Ala Arg Gly Met  
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 465 470 475 480  
 Asn Leu Glu Leu Pro Thr Asp Ala Val His Tyr Ala His Arg Ala Gly  
 485 490 495  
 Arg Thr Gly Arg Leu Gly Arg Lys Gly Thr Val Val Thr Val Cys Glu  
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 625 630 635 640  
 Ser Tyr Ala Phe Ser Thr Met Gly Lys Ile Met Lys Leu Gly Tyr Glu  
 645 650 655  
 Pro Asp Thr Val Ile Phe Asn Thr Leu Leu Asn Gly Leu Cys Leu Glu  
 660 665 670  
 Cys Arg Val Ser Glu Ala Leu Glu Leu Val Asp Arg Met Val Glu Met  
 Page 1479

Gly 690	Lys	Pro	Thr	Leu	Ile 695	Thr	Leu	Asn	Thr	Leu 700	Val	Asn	Gly	Leu	
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Asn	Val	Met	Cys 740	Lys	Ser	Gly	Gln	Thr 745	Ala	Leu	Ala	Met	Glu 750	Leu	Leu
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Ile	Ile 770	Ile	Asp	Gly	Leu	Cys 775	Lys	Asp	Gly	Ser	Leu 780	Asp	Asn	Ala	Phe
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Thr	Tyr	Asn	Thr	Leu 805	Ile	Gly	Gly	Phe	Cys 810	Asn	Ala	Gly	Arg	Trp 815	Asp
Asp	Gly	Ala	Lys 820	Leu	Leu	Arg	Asp	Met 825	Ile	Lys	Arg	Lys	Ile 830	Ser	Pro
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Lys	Leu 850	Arg	Glu	Ala	Asp	Gln 855	Leu	Leu	Lys	Glu	Met 860	Met	Gln	Arg	Gly
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Lys	Glu	Asn	Arg	Leu 885	Glu	Glu	Ala	Ile	Gln 890	Met	Val	Asp	Leu	Met 895	Ile
Ser	Lys	Gly	Cys 900	Asp	Pro	Asp	Ile	Met 905	Thr	Phe	Asn	Ile	Leu 910	Ile	Asn
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Tyr Lys Ile Leu Leu Asp Gly Leu Cys Asp Asn Gly Glu Leu Glu Lys  
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Ile Gly Ile Tyr Met Ile Ile Ile His Gly Met Cys Asn Ala Ser  
 1010 1015 1020

Lys Val Asp Asp Ala Trp Asp Leu Phe Cys Ser Leu Pro Leu Lys  
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Leu Lys  
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<210> 967

<211> 1041

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 967

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&lt;210&gt; 968

&lt;211&gt; 346

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 968

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Leu Gly Gly Lys Glu His Arg Val Lys Thr Ala Ser Gly Val Val Ser
20          25          30

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Val Ile Val Tyr Gly Asp Arg Glu Lys Pro Ala Leu Ile Thr Tyr Pro  
35 40 45

Asp Leu Ala Leu Asn His Met Ser Cys Phe Gln Gly Leu Phe Phe Cys  
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Pro Glu Ala Ala Ser Leu Leu Leu His Asn Phe Cys Ile Tyr His Ile  
65 70 75 80

Ser Pro Pro Gly His Glu Leu Gly Ala Ala Pro Ile Cys Pro Asn Asp  
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Ser Val Pro Ser Ala Glu Asn Leu Ala Asp Gln Ile Leu Glu Val Leu  
100 105 110

Asn Phe Phe Gly Leu Gly Val Val Met Cys Met Gly Val Thr Ala Gly  
115 120 125

Ala Tyr Ile Leu Thr Leu Phe Ala Met Lys His Arg Glu Arg Val Leu  
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Gly Leu Ile Leu Val Ser Pro Leu Cys Lys Ala Pro Ser Trp Ser Glu  
145 150 155 160

Trp Phe Tyr Asn Lys Val Ile Thr Asn Leu Leu Tyr Tyr Gly Met  
165 170 175

Cys Gly Val Val Lys Glu Phe Leu Leu Gln Arg Tyr Phe Ser Lys Glu  
180 185 190

Val Arg Gly Asn Val Glu Ile Pro Glu Ser Asp Ile Ala Gln Ala Cys  
195 200 205

Arg Arg Leu Leu Asp Glu Arg Gln Gly Ile Asn Val Leu Arg Phe Leu  
210 215 220

Asp Ala Ile Asp Arg Arg Pro Asp Ile Ser Ser Gly Leu Lys Lys Leu  
225 230 235 240

Lys Cys Arg Thr Leu Ile Phe Ile Gly Asp Gln Ser Pro Phe Tyr Ser  
245 250 255

Glu Ala Val His Met Ala Ala Thr Leu Asp Arg Gly Tyr Cys Ala Leu  
260 265 270

Val Glu Val Gln Ala Cys Gly Ser Met Val Thr Glu Glu Gln Pro His  
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275 047-E2F-PCT.ST25.txt 285  
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Arg Pro Ser Leu Phe Ser Glu Ser Pro Arg Ser Pro Leu Ser Pro Ser  
 305 310 315 320

Cys Ile Ser Pro Glu Leu Leu Ser Pro Glu Ser Met Gly Leu Lys Leu  
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<210> 969

<211> 354

<212> DNA

<213> Arabidopsis thaliana

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<210> 970

<211> 117

<212> PRT

<213> Arabidopsis thaliana

<400> 970

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Lys Pro Ile Lys Asn Val Ser Asp Pro Asp Val Val Ala Val Ala Lys  
 35 40 45

Tyr Ala Ile Glu Glu His Asn Lys Glu Ser Lys Glu Lys Leu Val Phe  
 50 55 60

Val Lys Val Val Glu Gly Thr Thr Gln Val Val Ser Gly Thr Lys Tyr  
 65 70 75 80

Asp Leu Lys Ile Ala Ala Lys Asp Gly Gly Gly Lys Ile Lys Asn Tyr  
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Ser Phe Lys Ala Leu  
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<211> 750

<212> DNA

<213> Arabidopsis thaliana

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<210> 972

&lt;211&gt; 249

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 972

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 20 25 30

Asn Ser Gly Thr Val Val Gly Ile Lys Cys Lys Asp Gly Ile Val Met  
 35 40 45

Gly Val Glu Lys Leu Ile Ala Ser Lys Met Met Leu Pro Gly Ser Asn  
 50 55 60

Arg Arg Ile His Ser Val His Arg His Ala Gly Met Ala Val Ala Gly  
 65 70 75 80

Leu Ala Ala Asp Gly Arg Gln Ile Val Ala Arg Ala Lys Ser Glu Ala  
 85 90 95

Arg Ser Tyr Glu Ser Val Tyr Gly Asp Ala Val Pro Val Lys Glu Leu  
 100 105 110

Ser Glu Arg Val Ala Ser Tyr Val His Leu Cys Thr Leu Tyr Trp Trp  
 115 120 125

Leu Arg Pro Phe Gly Cys Gly Val Ile Leu Gly Gly Tyr Asp Arg Asp  
 130 135 140

Gly Pro Gln Leu Tyr Met Ile Glu Pro Ser Gly Ile Ser Tyr Arg Tyr  
 145 150 155 160

Phe Gly Ala Ala Ile Gly Lys Gly Lys Gln Ala Ala Lys Thr Glu Ile  
 165 170 175

Glu Lys Leu Asn Leu Ser Glu Met Thr Cys Lys Glu Gly Val Ile Glu  
 180 185 190

Val Ala Lys Ile Ile Tyr Lys Leu His Asp Glu Ala Lys Asp Lys Ala  
 195 200 205

Phe Glu Leu Glu Met Ser Trp Ile Cys Glu Glu Ser Lys Arg Glu His  
 210 215 220

Gln Lys Val Pro Asp Asp Leu Leu Glu Glu Ala Lys Thr Ala Ala Lys  
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Thr Ala Leu Glu Glu Met Asp Ala Asp  
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<210> 973

<211> 1170

<212> DNA

<213> *Arabidopsis thaliana*

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<210> 974

<211> 389

<212> PRT

<213> Arabidopsis thaliana

<400> 974

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Gly Phe His Val Val Ser Arg Ala Leu Asn Met Gly Ile Ser Lys  
35 40 45

Leu Val Phe Pro Val Tyr Arg Asn Ile Ile Ala Leu Leu Leu Leu  
50 55 60

Pro Phe Ala Tyr Phe Leu Glu Lys Lys Glu Arg Pro Ala Ile Thr Leu  
65 70 75 80

Asn Phe Leu Ile Gln Phe Phe Phe Leu Ala Leu Ile Gly Ile Thr Ala  
85 90 95

Asn Gln Gly Phe Tyr Leu Leu Gly Leu Asp Asn Thr Ser Pro Thr Phe  
100 105 110

Ala Ser Ser Met Gln Asn Ser Val Pro Ala Ile Thr Phe Leu Met Ala  
115 120 125

Ala Leu Leu Arg Ile Glu Lys Val Arg Ile Asn Arg Arg Asp Gly Ile  
130 135 140

Ser Lys Ile Leu Gly Thr Ala Leu Cys Val Ala Gly Ala Ser Val Ile  
145 150 155 160

Thr Leu Tyr Lys Gly Pro Thr Ile Tyr Thr Pro Ala Ser His Leu His  
165 170 175

Ala His Leu Leu Thr Thr Asn Ser Ala Val Leu Ala Pro Leu Gly Asn  
180 185 190

Ala Ala Pro Lys Asn Trp Thr Leu Gly Cys Ile Tyr Leu Ile Gly His  
195 200 205

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Cys Leu Ser Trp Ser Gly Trp Leu Val Phe Gln Ala Pro Val Leu Lys  
210 215 220

Ser Tyr Pro Ala Arg Leu Ser Val Thr Ser Tyr Thr Cys Phe Phe Gly  
225 230 235 240

Ile Ile Gln Phe Leu Ile Ile Ala Ala Phe Cys Glu Arg Asp Ser Gln  
245 250 255

Ala Trp Val Phe His Ser Gly Trp Glu Leu Phe Thr Ile Leu Tyr Ala  
260 265 270

Gly Ile Val Ala Ser Gly Ile Ala Phe Ala Val Gln Ile Trp Cys Ile  
275 280 285

Asp Arg Gly Gly Pro Val Phe Val Ala Val Tyr Gln Pro Val Gln Thr  
290 295 300

Leu Val Val Ala Ile Met Ala Ser Ile Ala Leu Gly Glu Glu Phe Tyr  
305 310 315 320

Leu Gly Gly Ile Ile Gly Ala Val Leu Ile Ile Ala Gly Leu Tyr Phe  
325 330 335

Val Leu Tyr Gly Lys Ser Glu Glu Arg Lys Phe Ala Ala Leu Glu Lys  
340 345 350

Ala Ala Ile Gln Ser Ser Ala Glu His Gly Ile Glu Arg Ala Pro Val  
355 360 365

Ser Arg Asn Ser Ile Lys Ser Ser Ile Thr Thr Pro Leu Leu His Gln  
370 375 380

Ser Thr Asp Asn Val  
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<210> 975

<211> 1092

<212> DNA

<213> Arabidopsis thaliana

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<210> 976

<211> 363

<212> PRT

<213> Arabidopsis thaliana

<400> 976

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20 25 30

Leu Val Gly Arg Asp Ile Arg Thr Phe Lys Asp Asp Lys Glu Leu Glu  
35 40 45

Asn Gly Gln Met Ile Ser Pro Glu Leu Ile Leu Ala Ile Glu Asp Ser  
50 55 60



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Arg Phe Ala Val Val val Val Ser Val Asn Tyr Ala Ala Ser Ser Trp  
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 Ser Ile Thr Val Met Pro Ile Phe Tyr Gly Val Asn Pro Cys His Leu  
 100 105 110  
 Arg Arg Gln Ile Gly Asp Val Ala Glu Gln Phe Lys Lys His Glu Ala  
 115 120 125  
 Arg Glu Lys Asp Leu Glu Lys Val Leu Lys Trp Arg Gln Ala Leu Ala  
 130 135 140  
 Ala Leu Ala Asp Ile Ser Gly Asp Cys Ser Gly Glu Asp Asp Ser Lys  
 145 150 155 160  
 Leu Val Asp Val Ile Ala Asp Lys Ile Ser Lys Glu Leu Met Ile Val  
 165 170 175  
 Thr Arg Ile Ser Asn Gly Arg Asn Leu Val Gly Ile Asp Lys His Met  
 180 185 190  
 Asn Glu Leu Asn Arg Leu Met Asp Leu Asn Ser Asn Lys Gly Lys Arg  
 195 200 205  
 Met Val Gly Ile Trp Ala Arg Gly Gly Ser Cys Arg Ser Ala Leu Ala  
 210 215 220  
 Lys Tyr Val Tyr Gln Thr Ser Cys Gln His Phe Asp Ser His Cys Phe  
 225 230 235 240  
 Leu Gly Asn Val Lys Arg Ile Cys Gln Gly Asn Tyr Phe Glu Ser His  
 245 250 255  
 Leu His Lys Glu Phe Leu Asp Asn Ile Gln Gly Glu Asn Ser Ser Lys  
 260 265 270  
 Gln Ser Leu Lys Lys Gln Lys Val Leu Leu Val Ala Asp Asp Val Asp  
 275 280 285  
 Lys Leu Glu Gln Leu Asp Ala Leu Ala Gly Asp Phe Ser Gly Phe Gly  
 290 295 300  
 Pro Gly Ser Val Val Ile Ile Thr Thr Lys Asp Lys Gln Leu Leu Ile  
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305

310

315

320

Ser Tyr Gly Ile Gln Leu Val Tyr Glu Ala Glu Phe Leu Thr Phe Gln  
 325 330

Lys Phe Cys Arg Ser Phe Arg Ser Leu Ala Phe Lys Lys Arg Asp Asp  
 340 345 350

Ile Ser Ala Ala Phe Glu Trp Ala Leu Tyr Ile  
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&lt;210&gt; 977

&lt;211&gt; 1209

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 977

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<211> 402

<212> PRT

<213> Arabidopsis thaliana

<400> 978

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Thr Ser Asn Gly Ala Ala Pro Arg Leu Gln Thr Gln Pro Gln Val Tyr  
35 40 45

Asn Ile Ser Lys Asn Asp Phe Arg Ser Ile Val Gln Gln Leu Thr Gly  
50 55 60

Ser Pro Ser Arg Glu Ser Leu Pro Arg Pro Pro Gln Asn Asn Ser Leu  
65 70 75 80

Arg Pro Gln Asn Thr Arg Leu Gln Arg Ile Arg Pro Ser Pro Leu Thr  
85 90 95

Gln Leu Asn Arg Pro Ala Val Pro Leu Pro Ser Met Ala Pro Gln  
100 105 110

Ser His Pro Gln Phe Ala Arg Gln Pro Pro His Gln Pro Pro Phe Pro  
115 120 125

Gln Thr Thr Gln Gln Pro Met Met Gly His Arg Asp Gln Phe Trp Ser  
130 135 140

Asn Thr Ala Glu Ser Pro Val Ser Glu Tyr Met Arg Tyr Leu Gln Ser  
145 150 155 160

Ser Leu Gly Asp Ser Gly Pro Asn Ala Asn Gln Met Gln Pro Gly His  
165 170 175

Glu Gln Arg Pro Tyr Ile Pro Gly His Glu Gln Arg Pro Tyr Val Pro  
1493

Gly Asn Glu Gln Gln Pro Tyr Met Pro Gly Asn Glu Gln Arg Pro Tyr  
195 200 205

Ile Pro Gly His Glu Gln Arg Ser Tyr Met Pro Ala Gln Ser Gln Ser  
210 215 220

Gln Ser Gln Pro Gln Pro Gln Pro Gln Pro Gln His Met Met Pro  
225 230 235 240

Gly Pro Gln Pro Arg Met Asn Met Gln Gly Pro Leu Gln Pro Asn Gln  
245 250 255

Tyr Leu Pro Pro Gly Leu Val Pro Ser Pro Val Pro His Asn Leu  
260 265 270

Pro Ser Pro Arg Phe Asn Ala Pro Val Pro Val Thr Pro Thr Gln Pro  
275 280 285

Ser Pro Met Phe Ser Gln Met Tyr Gly Gly Phe Pro Ser Pro Arg Tyr  
290 295 300

Asn Gly Phe Gly Pro Leu Gln Ser Pro Thr Ser Gln Phe Leu Gln Pro  
305 310 315 320

Ser Pro Thr Gly Tyr Pro Asn Met Phe Ser Pro Arg Ser Pro Tyr Pro  
325 330 335

Leu Leu Ser Pro Gly Val Gln Tyr Pro Gln Pro Leu Thr Pro Asn Phe  
340 345 350

Ser Phe Ser Gln Ile Ala Gln Gln Gly Ser Leu Gly Pro Gly Ala Gly  
355 360 365

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<211> 1983

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 979

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<213> Arabidopsis thaliana

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Ser Gln Ile Pro Tyr Glu Glu Leu Asp Ile Ser Asp Glu Val Arg Glu  
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 Asp Asn Arg Val Ala Ile Ala Glu Ala Gly Ala Ile Pro Leu Leu Val  
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 Gly Leu Leu Ser Thr Pro Asp Ser Arg Ile Gln Glu His Ser Val Thr  
 Page 1497

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Ser Ala Gly Ala Ile Pro Gly Ile Val Gln Val Leu Lys Lys Gly Ser  
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Leu Val Glu Ala Gln Lys Leu Gly Leu Met Gly Pro Leu Ile Asp Leu  
595 600 605

Ala Gly Asn Gly Thr Asp Arg Gly Lys Arg Lys Ala Ala Gln Leu Leu  
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Glu Arg Ile Ser Arg Leu Ala Glu Gln Gln Lys Glu Thr Ala Val Ser  
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<211> 1119

<212> DNA

<213> *Arabidopsis thaliana*

<400> 981

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<212> PRT

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 Tyr Thr Asp Asn Gly Ser Ile Ile Tyr Ala His Ala Asn Ile Leu Gly  
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Ser Gln Leu Tyr Glu Ala Met Glu Ala Leu Val His Ile Cys Arg Asp  
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Gly Cys Lys Thr Ile Gly Pro His Asp Lys Asp Phe Lys Pro Asn His  
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<211> 3255

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<212> PRT

<213> Arabidopsis thaliana

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Arg Ala Thr Gly Glu Gly Val Gln Pro Gln Glu Tyr Thr Leu Ile Lys  
260 265 270

Met Glu Val Val Lys Pro Phe Pro Leu Lys Leu Gly Pro Leu Glu Gly  
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 Page 1505

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047-E2F-PCT.ST25.txt

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&lt;210&gt; 985

&lt;211&gt; 1470

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 985

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1470

&lt;210&gt; 986

&lt;211&gt; 489

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 986

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20 25 30Lys Leu Leu His Ala Arg Gly Phe Tyr Val Thr Phe Val Asn Thr Val  
35 40 45Tyr Asn His Asn Arg Phe Leu Arg Ser Arg Gly Ser Asn Ala Leu Asp  
50 55 60Gly Leu Pro Ser Phe Arg Phe Glu Ser Ile Ala Asp Gly Leu Pro Glu  
65 70 75 80Thr Asp Met Asp Ala Thr Gln Asp Ile Thr Ala Leu Cys Glu Ser Thr  
85 90 95Met Lys Asn Cys Leu Ala Pro Phe Arg Glu Leu Leu Gln Arg Ile Asn  
100 105 110Ala Gly Asp Asn Val Pro Pro Val Ser Cys Ile Val Ser Asp Gly Cys  
115 120 125Met Ser Phe Thr Leu Asp Val Ala Glu Glu Leu Gly Val Pro Glu Val  
130 135 140Leu Phe Trp Thr Thr Ser Gly Cys Ala Phe Leu Ala Tyr Leu His Phe  
145 150 155 160Tyr Leu Phe Ile Glu Lys Gly Leu Cys Pro Leu Lys Asp Glu Ser Tyr  
165 170 175Leu Thr Lys Glu Tyr Leu Glu Asp Thr Val Ile Asp Phe Ile Pro Thr  
180 185 190

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Met Lys Asn Val Lys Leu Lys Asp Ile Pro Ser Phe Ile Arg Thr Thr  
195 200 205

Asn Pro Asp Asp Val Met Ile Ser Phe Ala Leu Arg Glu Thr Glu Arg  
210 215 220

Ala Lys Arg Ala Ser Ala Ile Ile Leu Asn Thr Phe Asp Asp Leu Glu  
225 230 235 240

His Asp Val Val His Ala Met Gln Ser Ile Leu Pro Pro Val Tyr Ser  
245 250 255

Val Gly Pro Leu His Leu Leu Ala Asn Arg Glu Ile Glu Glu Gly Ser  
260 265 270

Glu Ile Gly Met Met Ser Ser Asn Leu Trp Lys Glu Glu Met Glu Cys  
275 280 285

Leu Asp Trp Leu Asp Thr Lys Thr Gln Asn Ser Val Ile Tyr Ile Asn  
290 295 300

Phe Gly Ser Ile Thr Val Leu Ser Val Lys Gln Leu Val Glu Phe Ala  
305 310 315 320

Trp Gly Leu Ala Gly Ser Gly Lys Glu Phe Leu Trp Val Ile Arg Pro  
325 330 335

Asp Leu Val Ala Gly Glu Glu Ala Met Val Pro Pro Asp Phe Leu Met  
340 345 350

Glu Thr Lys Asp Arg Ser Met Leu Ala Ser Trp Cys Pro Gln Glu Lys  
355 360 365

Val Leu Ser His Pro Ala Ile Gly Gly Phe Leu Thr His Cys Gly Trp  
370 375 380

Asn Ser Ile Leu Glu Ser Leu Ser Cys Gly Val Pro Met Val Cys Trp  
385 390 395 400

Pro Phe Phe Ala Asp Gln Gln Met Asn Cys Lys Phe Cys Cys Asp Glu  
405 410 415

Trp Asp Val Gly Ile Glu Ile Gly Gly Asp Val Lys Arg Glu Glu Val  
420 425 430

Glu Ala Val Val Arg Glu Leu Met Asp Gly Glu Lys Gly Lys Lys Met  
435 440 445

Arg Glu Lys Ala Val Glu Trp Gln Arg Leu Ala Glu Lys Ala Thr Glu  
 450 455 460

His Lys Leu Gly Ser Ser Val Met Asn Phe Glu Thr Val Val Ser Lys  
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Phe Leu Leu Gly Gln Lys Ser Gln Asp  
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<210> 987

<211> 1020

<212> DNA

<213> Arabidopsis thaliana

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 aaggatggaa ttctctcatc tttaggcaaga cgtgcaaaga ctcttgaaga ggctctgaac 720  
 aagctagagg gagttacatg caatagagca gaaggagcta tgtatctatt cccttgccctt 780  
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<210> 988

<211> 339

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 988

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20 25 30Leu Tyr Ser Ala Ser Ile Ala Leu His Gly Gly Thr Leu Val Pro Tyr  
35 40 45Tyr Leu Asp Glu Ala Ser Gly Trp Gly Leu Glu Ile Ser Glu Leu Lys  
50 55 60Lys Gln Leu Glu Asp Ala Arg Ser Lys Gly Ile Thr Val Arg Ala Leu  
65 70 75 80Ala Val Ile Asn Pro Gly Asn Pro Thr Gly Gln Val Leu Ser Glu Glu  
85 90 95Asn Gln Arg Asp Val Val Lys Phe Cys Lys Gln Glu Gly Leu Val Leu  
100 105 110Leu Ala Asp Glu Val Tyr Gln Glu Asn Val Tyr Val Pro Asp Lys Lys  
115 120 125Phe His Ser Phe Lys Lys Val Ala Arg Ser Met Gly Tyr Gly Glu Lys  
130 135 140Asp Leu Ala Leu Val Ser Phe Gln Ser Val Ser Lys Gly Tyr Tyr Gly  
145 150 155 160Glu Cys Gly Lys Arg Gly Gly Tyr Met Glu Val Thr Gly Phe Thr Ser  
165 170 175Asp Val Arg Glu Gln Ile Tyr Lys Met Ala Ser Val Asn Leu Cys Ser  
180 185 190Asn Ile Ser Gly Gln Ile Leu Ala Ser Leu Ile Met Ser Pro Pro Lys  
195 200 205Pro Gly Asp Asp Ser Tyr Glu Ser Tyr Ile Ala Glu Lys Asp Gly Ile  
210 215 220

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Leu Ser Ser Leu Ala Arg Arg Ala Lys Thr Leu Glu Glu Ala Leu Asn  
225 230 235 240

Lys Leu Glu Gly Val Thr Cys Asn Arg Ala Glu Gly Ala Met Tyr Leu  
245 250 255

Phe Pro Cys Leu His Leu Pro Gln Lys Ala Ile Ala Ala Ala Glu Ala  
260 265 270

Glu Lys Thr Ala Pro Asp Asn Phe Tyr Cys Lys Arg Leu Leu Lys Ala  
275 280 285

Thr Gly Ile Val Val Val Pro Gly Ser Gly Phe Arg Gln Val Pro Gly  
290 295 300

Thr Trp His Phe Arg Cys Thr Ile Leu Pro Gln Glu Asp Lys Ile Pro  
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Phe Arg Asp

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<211> 1260

<212> DNA

<213> Arabidopsis thaliana

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gttcatccag aggggaagta tggtgttgat attgacaaaa gtatagacat tacgaaatc 360  
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agtaaagtag atcccttggg taaccttatg aaagttgaga aggttccaga ctccacctat 480  
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agaatgggtca	gagaactttt	tgtgatggca	agggagcatg	caccatcaat	catcttcattg	780
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&lt;210&gt; 990

&lt;211&gt; 419

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 990

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Glu	Thr	Cys	Asn	Val	Lys	Gly	Ala	Ala	Ala	Lys	Gln	Gly	Glu	Gly	Leu
			20					25					30		

Lys	Gln	Tyr	Tyr	Leu	Gln	His	Ile	His	Glu	Leu	Gln	Arg	Gln	Leu	Arg
		35					40					45			

Gln	Lys	Thr	Asn	Asn	Leu	Asn	Arg	Leu	Glu	Ala	Gln	Arg	Asn	Glu	Leu
	50					55					60				

Asn	Ser	Arg	Val	Arg	Met	Leu	Arg	Glu	Glu	Leu	Gln	Leu	Leu	Gln	Glu
65					70					75				80	

Pro	Gly	Ser	Tyr	Val	Gly	Glu	Val	Val	Lys	Val	Met	Gly	Lys	Asn	Lys
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Val	Leu	Val	Lys	Val	His	Pro	Glu	Gly	Lys	Tyr	Val	Val	Asp	Ile	Asp
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Lys Ser Ile Asp Ile Thr Lys Ile Thr Pro Ser Thr Arg Val Ala Leu  
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 Pro Leu Val Asn Leu Met Lys Val Glu Lys Val Pro Asp Ser Thr Tyr  
 145 150 155 160  
 Asp Met Ile Gly Gly Leu Asp Gln Gln Ile Lys Glu Ile Lys Glu Val  
 165 170 175  
 Ile Glu Leu Pro Ile Lys His Pro Glu Leu Phe Glu Ser Leu Gly Ile  
 180 185 190  
 Ala Gln Pro Lys Gly Val Leu Leu Tyr Gly Pro Pro Gly Thr Gly Lys  
 195 200 205  
 Thr Leu Leu Ala Arg Ala Val Ala His His Thr Asp Cys Thr Phe Ile  
 210 215 220  
 Arg Val Ser Gly Ser Glu Leu Val Gln Lys Tyr Ile Gly Glu Gly Ser  
 225 230 235 240  
 Arg Met Val Arg Glu Leu Phe Val Met Ala Arg Glu His Ala Pro Ser  
 245 250 255  
 Ile Ile Phe Met Asp Glu Ile Asp Ser Ile Gly Ser Ala Arg Met Glu  
 260 265 270  
 Ser Gly Ser Gly Asn Gly Asp Ser Glu Val Gln Arg Thr Met Leu Glu  
 275 280  
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 290 295 300  
 Leu Met Ala Thr Asn Arg Ile Asp Ile Leu Asp Gln Ala Leu Leu Arg  
 305 310 315 320  
 Pro Gly Arg Ile Asp Arg Lys Ile Glu Phe Pro Asn Pro Asn Glu Glu  
 325 330 335  
 Ser Arg Phe Asp Ile Leu Lys Ile His Ser Arg Lys Met Asn Leu Met  
 340 345 350  
 Arg Gly Ile Asp Leu Lys Lys Ile Ala Glu Lys Met Asn Gly Ala Ser  
 Page 1515

355

360

365

Gly Ala Glu Leu Lys Ala Val Cys Thr Glu Ala Gly Met Phe Ala Leu  
 370 375 380

Arg Glu Arg Arg Val His Val Thr Gln Glu Asp Phe Glu Met Ala Val  
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Leu Trp Lys

<210> 991

<211> 1377

<212> DNA

<213> Arabidopsis thaliana

<400> 991

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gttctattta ttgatgaggt tcatatgctt gatatggagt gcttctcata cttgaaccgt	960
gctcttgaga gctcattatc tccgatagtg atatttgcaa caaatagagg tgtttgcaac	1020

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gcgcaagttg aagaattaac cgtggatgaa gaatgcttgg ttctacttgg ggagattggg 1200  
caaagaactt cactaaggca cgctgtgcag cttctgtctc ctgccagcat ttagcgaaa 1260  
atgaatggcc gtgacaatat ttgcaaggct gatatagagg aagtaacatc actctacttg 1320  
gatgctaaat cttcagcaaa gcttttgcac gagcaacaag aaaaatacat ctcatga 1377

<210> 992

<211> 458

<212> PRT

<213> Arabidopsis thaliana

<400> 992

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20 25 30

Gly Ile Pro Ile Lys Leu Ala Ala Gly Phe Val Gly Gln Leu Glu Ala  
35 40 45

Arg Glu Ala Ala Gly Leu Val Val Asp Met Ile Lys Gln Lys Lys Met  
50 55 60

Ala Gly Lys Ala Leu Leu Leu Ala Gly Pro Pro Gly Thr Gly Lys Thr  
65 70 75 80

Ala Leu Ala Leu Gly Ile Ser Gln Glu Leu Gly Ser Lys Val Pro Phe  
85 90 95

Cys Pro Met Val Gly Ser Glu Val Tyr Ser Ser Glu Val Lys Lys Thr  
100 105 110

Glu Val Leu Met Glu Asn Phe Arg Arg Ala Ile Gly Leu Arg Ile Lys  
115 120 125

Glu Thr Lys Glu Val Tyr Glu Gly Glu Val Thr Glu Leu Ser Pro Glu  
130 135 140

Glu Thr Glu Ser Leu Thr Gly Gly Tyr Gly Lys Ser Ile Ser His Val  
145 150 155 160 165 170 175 180 185 190 195 200 205 210 215 220 225 230 235 240 245 250 255 260 265 270 275 280 285 290 295 300 305 310 315 320 325 330 335 340 345 350 355 360 365 370 375 380 385 390 395 400 405 410 415 420 425 430 435 440 445 450 455 460 465 470 475 480 485 490 495 500 505 510 515 520 525 530 535 540 545 550 555 560 565 570 575 580 585 590 595 600 605 610 615 620 625 630 635 640 645 650 655 660 665 670 675 680 685 690 695 700 705 710 715 720 725 730 735 740 745 750 755 760 765 770 775 780 785 790 795 800 805 810 815 820 825 830 835 840 845 850 855 860 865 870 875 880 885 890 895 900 905 910 915 920 925 930 935 940 945 950 955 960 965 970 975 980 985 990 992

145                      150                      160

Val Ile Thr Leu Lys Thr Val Lys Gly Thr Lys His Leu Lys Leu Asp  
                                 165                      170                      175

Pro Thr Ile Tyr Asp Ala Leu Ile Lys Glu Lys Val Ala Val Gly Asp  
                                 180                      185                      190

Val Ile Tyr Ile Glu Ala Asn Ser Gly Ala Val Lys Arg Val Gly Arg  
                                 195                      200                      205

Ser Asp Ala Phe Ala Thr Glu Phe Asp Leu Glu Ala Glu Glu Tyr Val  
                                 210                      215                      220

Pro Leu Pro Lys Gly Glu Val His Lys Lys Lys Glu Ile Val Gln Asp  
225                      230                      235

Val Thr Leu Gln Asp Leu Asp Ala Ala Asn Ala Arg Pro Gln Gly Gly  
                                 245                      250                      255

Gln Asp Ile Leu Ser Leu Met Gly Gln Met Met Lys Pro Arg Lys Thr  
                                 260                      265                      270

Glu Ile Thr Asp Lys Leu Arg Gln Glu Ile Asn Lys Val Val Asn Arg  
                                 275                      280                      285

Tyr Ile Asp Glu Gly Val Ala Glu Leu Val Pro Gly Val Leu Phe Ile  
                                 290                      295                      300

Asp Glu Val His Met Leu Asp Met Glu Cys Phe Ser Tyr Leu Asn Arg  
305                      310                      315                      320

Ala Leu Glu Ser Ser Leu Ser Pro Ile Val Ile Phe Ala Thr Asn Arg  
                                 325                      330                      335

Gly Val Cys Asn Val Arg Gly Thr Asp Met Pro Ser Pro His Gly Val  
                                 340                      345                      350

Pro Ile Asp Leu Leu Asp Arg Leu Val Ile Ile Arg Thr Gln Ile Tyr  
                                 355                      360                      365

Asp Pro Ser Glu Met Ile Gln Ile Ile Ala Ile Arg Ala Gln Val Glu  
                                 370                      375                      380

Glu Leu Thr Val Asp Glu Glu Cys Leu Val Leu Leu Gly Glu Ile Gly  
385                      390                      395                      400

Gln Arg Thr Ser Leu Arg His Ala Val Gln Leu Leu Ser Pro Ala Ser  
 405 410 415

Ile Val Ala Lys Met Asn Gly Arg Asp Asn Ile Cys Lys Ala Asp Ile  
 420 425 430

Glu Glu Val Thr Ser Leu Tyr Leu Asp Ala Lys Ser Ser Ala Lys Leu  
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Leu His Glu Gln Gln Glu Lys Tyr Ile Ser  
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<210> 993

<211> 297

<212> DNA

<213> Arabidopsis thaliana

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 gatgaatctc atgaacgtgt gttttccaca aaggaaggag tacaacaaca tgtgttgggt 180  
 ttgtacatca tcagagggga caacataggt gttatcgggg agctggacga ggagcttgat 240  
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<210> 994

<211> 98

<212> PRT

<213> Arabidopsis thaliana

<400> 994

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 1 5 10 15

Val Ile Thr Asn Asp Gly Arg Asn Ile Val Gly Val Leu Lys Gly Phe  
 20 25 30

Asp Gln Ala Thr Asn Ile Ile Leu Asp Glu Ser His Glu Arg Val Phe  
 35 40 45

Ser Thr Lys Glu Gly Val Gln Gln His Val Leu Gly Leu Tyr Ile Ile  
 Page 1519

50

55

60

Arg Gly Asp Asn Ile Gly Val Ile Gly Glu Leu Asp Glu Glu Leu Asp  
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Ala Ser Leu Asp Phe Ser Lys Leu Arg Ala His Pro Leu Lys Pro Val  
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Val His

<210> 995

<211> 624

<212> DNA

<213> Arabidopsis thaliana

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<210> 996

<211> 207

<212> PRT

<213> Arabidopsis thaliana

<400> 996

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20 25 30

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35 40 45

Pro Asn Gln Cys Cys Ser Ala Val Ile Gln Glu Ile Ser Ala Pro Ile  
50 55 60

Ser Thr Val Trp Ser Val Val Arg Arg Phe Asp Asn Pro Gln Ala Tyr  
65 70 75 80

Lys His Phe Leu Lys Ser Cys Ser Val Ile Gly Gly Asp Gly Asp Asn  
85 90 95

Val Gly Ser Leu Arg Gln Val His Val Val Ser Gly Leu Pro Ala Ala  
100 105 110

Ser Ser Thr Glu Arg Leu Asp Ile Leu Asp Asp Glu Arg His Val Ile  
115 120 125

Ser Phe Ser Val Val Gly Gly Asp His Arg Leu Ser Asn Tyr Arg Ser  
130 135 140

Val Thr Thr Leu His Pro Ser Pro Ile Ser Gly Thr Val Val Val Glu  
145 150 155 160

Ser Tyr Val Val Asp Val Pro Pro Gly Asn Thr Lys Glu Glu Thr Cys  
165 170 175

Asp Phe Val Asp Val Ile Val Arg Cys Asn Leu Gln Ser Leu Ala Lys  
180 185 190

Ile Ala Glu Asn Thr Ala Ala Glu Ser Lys Lys Lys Met Ser Leu  
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<210> 997

<211> 969

<212> DNA

<213> Arabidopsis thaliana

<400> 997  
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Arg Gln Leu Cys Leu Ala Ser Lys Glu Val Phe Leu Ser Gln Pro Asn  
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Gln Phe Pro Asp Leu Leu Arg Leu Phe Glu Tyr Gly Gly Tyr Pro Pro  
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Ala Ala Asn Tyr Leu Phe Leu Gly Asp Tyr Val Asp Arg Gly Lys Gln  
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Arg Val Tyr Gly Phe Tyr Asp Glu Cys Lys Arg Arg Tyr Asn Val Arg  
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Ile Lys Ser Leu Asp Asp Ile Arg Arg Ile Pro Arg Pro Ile Asp Val  
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Pro Asp Gln Gly Ile Leu Cys Asp Leu Leu Trp Ala Asp Pro Asp Arg  
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Glu Ile Gln Gly Trp Gly Glu Asn Asp Arg Gly Val Ser Tyr Thr Phe  
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Gly Ala Asp Lys Val Ala Glu Phe Leu Gln Thr His Asp Leu Asp Leu  
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Phe Gly Lys Ile Glu Asp Phe Arg Phe Leu Arg Glu Arg Lys Thr Ala  
 275 280 285

Phe Ile Asp Tyr Tyr Glu Met Asp Asp Ala Leu Gln Ala Lys Ser Met  
 290 295 300

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 Glu Val Val Asn Cys Ser Ala Arg Thr Asp Leu Asn Met Leu Ala Lys  
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Tyr Gly Asn Gln Tyr Thr Pro Ala Gly Gln Leu Pro Pro Pro Pro Ser  
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Arg Tyr Pro Pro Ala Ser Asn Asn Pro Asn Tyr Thr Ser Gly Met Val  
885 890 895

His Gly Asn Met Gln Tyr Gln Ser Gln Ser Val Asn Met Pro Gln Leu  
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Pro Glu Ala Ser Met Pro Asn Gln Asn Tyr Gly Pro Ile Pro Ser Tyr  
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Asn Pro Ser Gln Phe Gln Ala Ala Met Gln Pro Pro Ala Asp Lys Ala

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Arg Tyr Gln Ser Thr Leu Gln Phe Ala Ala Asn Leu Leu Leu Gln  
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&lt;211&gt; 402

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

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Gln Tyr Ser Ser Ser Arg	Pro Ser Ala Gly Phe	Gln Gly Asn Arg Ser
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Thr Cys Ser Leu Phe Leu	Gly Thr Trp Val	Arg Asp Asn Ser Tyr	Pro
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Leu Tyr Lys Pro Ala Asp Cys	Pro Gly Val	Val Glu Pro Glu	Phe Asp
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Cys Gln Met Tyr	Gly Arg Pro Asp	Ser Asp Tyr Leu Lys	Tyr Arg Trp
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Gln Pro Gln Asn Cys Asn Leu	Pro Thr Phe Asn Gly	Ala Gln Phe Leu
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Leu Lys Met Lys Gly Lys	Thr Ile Met Phe Ala	Gly Asp Ser Leu Gly
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Lys Asn Gln Trp Glu Ser Leu	Ile Cys Leu Ile Val	Ser Ser Ala Pro
		Page 1531

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<213> *Arabidopsis thaliana*

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&lt;210&gt; 1004

&lt;211&gt; 561

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1004

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Phe Pro Leu Tyr Ser Ser Ala Leu Lys Ser Val Leu Gly Phe Ser Gln  
 35 40 45

Gln Gln Val Thr Ile Leu Gly Val Ala Cys Asp Leu Gly Glu Asn Met  
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Gly Leu Leu Pro Gly Tyr Ala Ser Asn Lys Leu Pro Pro Trp Ser Met  
 65 70 75 80

Leu Leu Ile Gly Ala Ser Ser Cys Phe Leu Gly Phe Gly Val Leu Trp  
 85 90 95

Leu Ser Val Ser Gln Ile Val Leu Gly Leu Pro Phe Trp Leu Leu Phe  
 100 105 110

Val Ala Leu Ala Leu Ala Thr Asn Ser Asn Ser Trp Phe Gly Thr Ala  
 115 120 125

Ser Leu Val Thr Asn Met Arg Asn Phe Pro Met Ser Arg Gly Pro Val  
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Ala Gly Leu Leu Lys Gly Tyr Ile Gly Ile Ser Gly Ala Ala Phe Thr  
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Val Leu Phe Ser Met Val Leu His His Ser Ala Met Asp Leu Leu Leu  
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180 185 190

Ile Arg Pro Cys Ile Pro Ala Thr Gly Glu Asp Pro Ser Glu Pro Met  
195 200 205

Tyr Phe Ala Phe Leu Leu Val Thr Ser Ile Leu Phe Ala Ala Tyr Leu  
210 215 220

Val Val Thr Thr Val Leu Ser Glu Val Phe Ile Leu Pro Ser Ile Leu  
225 230 235 240

Lys Tyr Val Leu Val Ala Ile Met Val Leu Leu Leu Ser Pro Leu  
245 250 255

Ala Val Pro Ile Lys Met Thr Leu Phe Arg Ser Asn Ala Lys Ser Ser  
260 265 270

Pro Leu Gly Ser Ser Asp Asn Leu Ala Lys Glu Glu Gly Thr His Glu  
275 280 285

Glu Pro Leu Leu Thr Pro Ser Thr Ser Ala Ser Asn Leu Gly Pro Ile  
290 295 300

Phe Glu Gly Asp Asp Glu Ser Asp Met Glu Ile Leu Leu Ala Glu Ala  
305 310 315 320

Glu Gly Ala Val Lys Lys Lys Arg Lys Pro Arg Arg Gly Glu Asp Phe  
325 330 335

Lys Phe Gly Gln Val Phe Val Lys Ala Asp Phe Trp Leu Leu Trp Phe  
340 345 350

Val Tyr Phe Leu Gly Met Gly Ser Gly Val Thr Val Ser Asn Asn Leu  
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Ala Gln Ile Gly Phe Ala Phe Gly Ile Lys Asp Thr Thr Ile Leu Leu  
370 375 380

Cys Leu Phe Ser Phe Phe Asn Phe Ile Gly Arg Leu Ala Ser Gly Ala  
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Ile Ser Glu His Phe Val Arg Ser Arg Thr Leu Pro Arg Thr Leu Trp  
405 410 415

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Met Gly Ala Ala Gln Leu Val Met Val Phe Thr Phe Leu Phe Ala  
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Met Ala Ile Asp His Thr Ile Tyr Val Ala Thr Ala Leu Ile Gly Ile  
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Cys Met Gly Phe Gln Phe Leu Ser Ile Ala Thr Ile Ser Glu Leu Phe  
450 455 460

Gly Leu Arg His Phe Gly Ile Asn Phe Asn Phe Ile Leu Leu Gly Asn  
465 470 475 480

Pro Leu Gly Ala Thr Ile Phe Ser Ala Ile Leu Ala Gly Tyr Ile Tyr  
485 490 495

Asp Lys Glu Ala Asp Lys Gln Gly Lys Met Thr Cys Ile Gly Pro Asp  
500 505 510

Cys Phe Arg Val Thr Phe Leu Val Leu Ala Gly Val Cys Gly Leu Gly  
515 520 525

Thr Leu Leu Ser Ile Ile Leu Thr Val Arg Ile Arg Pro Val Tyr Gln  
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<211> 507

<212> DNA

<213> Arabidopsis thaliana

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<212> PRT

<213> Arabidopsis thaliana

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Ser Gln Ser Leu Val Leu Gly Arg Asn Leu Leu Gln Thr Lys Lys Thr  
35 40 45

Cys Pro Val Asn Phe Glu Phe Met Asn Tyr Thr Ile Ile Thr Ser Lys  
50 55 60

Cys Lys Gly Pro Lys Tyr Pro Pro Lys Glu Cys Cys Gly Ala Phe Lys  
65 70 75 80

Asp Phe Ala Cys Pro Tyr Thr Asp Gln Leu Asn Asp Leu Ser Ser Asp  
85 90 95

Cys Ala Thr Thr Met Phe Ser Tyr Ile Asn Leu Tyr Gly Lys Tyr Pro  
100 105 110

Pro Gly Leu Phe Ala Asn Gln Cys Lys Glu Gly Lys Glu Gly Leu Glu  
115 120 125

Cys Pro Ala Gly Ser Gln Leu Pro Pro Glu Thr Ser Ala Glu Val Asn  
130 135 140

Ala Ala Thr Thr Ser Ser Arg Leu Trp Leu Thr Val Ser Ala Ala  
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Leu Leu Val Phe Val Lys Leu Phe  
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&lt;211&gt; 1788

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1007

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<212> PRT

<213> Arabidopsis thaliana

<400> 1008

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Leu Asp Gly Phe Pro Glu Val Lys Val Val Leu Arg Ala Asp Val Ser  
35 40 45

Ala Ala Lys Tyr Asp Lys Val Ala Val Ile Ser Gly Gly Gly Ser Gly  
50 55 60

His Glu Pro Ala His Ala Gly Tyr Val Gly Glu Gly Met Leu Thr Ala  
65 70 75 80

Ala Ile Cys Gly Asp Val Phe Ala Ser Pro Pro Val Asp Ser Ile Leu  
85 90 95

Ala Gly Ile Arg Ala Val Thr Gly Thr Glu Gly Cys Leu Leu Ile Val  
100 105 110

Lys Asn Tyr Thr Gly Asp Arg Leu Asn Phe Gly Leu Ala Ala Glu Gln  
115 120 125

Ala Lys Ser Glu Gly Tyr Lys Val Glu Thr Val Ile Val Gly Glu Asp  
130 135 140

Cys Ala Leu Pro Pro Pro Arg Gly Ile Ala Gly Arg Arg Gly Leu Ala  
145 150 155 160

Gly Thr Val Leu Val His Lys Val Ala Gly Ala Ala Ala Ala Ala Gly  
Page 1539

Leu Ser Leu Glu Lys Val Ala Ala Glu Ala Lys Cys Ala Ser Glu Met  
180 185 190

Val Gly Thr Met Gly Val Ala Leu Ser Val Cys Thr Leu Pro Gly Gln  
195 200 205

Val Thr Ser Asp Arg Leu Gly Ala Gln Lys Met Glu Leu Gly Leu Gly  
210 215 220

Ile His Gly Glu Pro Gly Ala Ala Val Val Asp Val Glu Pro Val Asp  
225 230 235 240

Val Val Val Ser His Val Leu Gln Gln Ile Leu Ser Pro Glu Thr Asn  
245 250 255

Tyr Val Pro Ile Thr Arg Gly Asn Arg Val Val Leu Met Val Asn Gly  
260 265 270

Leu Gly Gly Thr Pro Leu Met Glu Leu Met Ile Ala Ala Gly Lys Ala  
275 280 285

Val Pro Lys Leu Gln Leu Glu Phe Gly Leu Ala Val Asp Arg Val Tyr  
290 295 300

Thr Gly Phe Phe Met Thr Ser Leu Asp Met Ala Gly Phe Ser Ile Ser  
305 310 315 320

Ile Met Lys Ala Asp His Ser Ile Leu Asp Arg Leu Asp Ala Pro Thr  
325 330 335

Lys Ala Pro Asn Trp Pro Val Gly Thr Asp Gly Asn Arg Pro Pro Ala  
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Lys Ile Pro Val Pro Val Pro Pro Ser Arg Ser Ile Lys Ser Met Glu  
355 360 365

Ser Gln Ser Arg Pro Leu Glu Leu Ser Lys Glu Gly Gln Val Leu Glu  
370 375 380

Ala Ala Ile Gln Ala Ala Ala Thr Val Ile Ile Ser Leu Lys Asp Ser  
385 390 395 400

Leu Asn Glu Trp Asp Gly Lys Val Gly Asp Gly Asp Cys Gly Ser Thr  
405 410 415

Met Tyr Arg Gly Ala Thr Ala Ile Leu Glu Asp Met Lys Asn Tyr Tyr  
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Pro Leu Asn Asp Ala Ala Glu Thr Val Asn Glu Ile Gly Leu Ser Ile  
 435 440 445

Lys Arg Ala Met Gly Gly Thr Ser Gly Ile Ile Tyr His Leu Leu Cys  
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Pro Lys Asn Trp Ser Glu Ala Leu Lys Ser Ser Ile Ala Ser Val Ser  
 485 490 495

Lys Tyr Gly Gly Ala Thr Ala Gly Tyr Arg Thr Met Leu Asp Ala Leu  
 500 505 510

Ile Pro Ala Ser Gln Val Leu Glu Glu Lys Leu Ser Ala Gly Glu Asp  
 515 520 525

Pro Ile Ser Ala Phe Ile Leu Ser Gly Glu Ala Ala Thr Ala Gly Ala  
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Glu Ser Thr Ile Gln Met Gln Ala Gln Ala Gly Arg Ser Ser Tyr Val  
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<213> Arabidopsis thaliana

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<212> PRT

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Thr Thr Val Thr	35	Lys Ala Lys Glu	40	Val Arg Arg Leu	45	Ala Asp Asn Met

Ile Gln Leu Gly	50	Lys Glu Gly Ser	55	Leu Ser Ala Ala	60	Arg Arg Ala Ala

Gly Phe Val Arg	65	Gly Asp Asp Val	70	Leu His Lys	75	Ile Phe Thr Glu Leu

Ala His Arg Tyr	85	Lys Asp Arg Ala	90	Gly Gly Tyr Thr	95	Arg Leu Leu Arg

Thr Arg Ile Arg	100	Val Gly Asp Ala	105	Ala Pro Met Ala	110	Tyr Ile Glu Phe

Ile Asp Arg Glu	115	Asn Glu Leu Arg	120	Gln Ser Lys Pro	125	Ala Thr Pro Gln

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<210> 1011

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<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 1012

&lt;211&gt; 990

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1012

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50      55      60
His Pro Leu Gln Cys Arg Ala Leu Glu Leu Cys Phe Ser Val Ala Leu
65      70      75
Glu Arg Leu Pro Thr Ala Thr Thr Thr Pro Gly Asn Asp Pro Pro Ile
85      90      95
Ser Asn Ala Leu Met Ala Ala Leu Lys Arg Ala Gln Ala His Gln Arg
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Arg Val Met Arg Glu Ala Ser Phe Ser Ser Pro Ala Val Lys Ala Thr
145     150     155
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165     170
Val Ser Ser Val Gly Leu Asn Phe Arg Pro Gly Gly Gly Gly Pro Met
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Thr Arg Asn Ser Tyr Leu Asn Pro Arg Leu Gln Gln Asn Ala Ser Ser
195     200     205
Val Gln Ser Gly Val Ser Lys Asn Asp Asp Val Glu Arg Val Met Asp
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1545

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Ile Gly Thr Ala Thr Cys Glu Thr Tyr Leu Arg Cys Gln Val Tyr His  
355 360 365

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Lys Ala Pro Ala Ser Gly Val Phe Pro Arg Leu Ala Asn Asn Leu Glu  
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405 410 415

Cys Cys Pro Gln Cys Leu Gln Ser Tyr Glu Arg Glu Leu Ala Glu Ile  
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Arg Leu His Pro Ser Phe His Asn Lys Asn Glu Arg Ile Val Pro Ile  
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Lys Lys Lys Ser Pro Pro Gly Ser Pro Val Gln Thr Asp Leu Val Leu  
545 550 555 560

Gly Arg Ala Glu Asp Ser Glu Lys Ala Gly Asp Val Gln Val Arg Asp  
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580 585 590

Ser Val Leu Gln Lys Glu Asn Leu Gly Asn Ser Leu Asp Ile Asp Leu  
595 600 605

Phe Lys Lys Leu Leu Lys Gly Met Thr Glu Lys Val Trp Trp Gln Asn  
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Arg Gln Asp Ala Gly Asp Gly Asn Ser Ser Phe Arg Gly Lys Thr Ala  
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Leu Leu Glu Asp Ile Asp Glu Ala Asp Met Leu Val Arg Gly Ser Ile  
725 730 735

Lys Gln Ala Met Asp Arg Gly Arg Ile Arg Asp Ser His Gly Arg Glu  
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Ile Ser Leu Gly Asn Val Ile Phe Val Met Thr Ala Ser Trp His Phe  
755 760

Ala Gly Thr Lys Thr Ser Phe Leu Asp Asn Glu Ala Lys Leu Arg Asp  
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785 790 795 800

Gly Lys Arg Arg Ala Ser Trp Leu Cys Ser Asp Glu Glu Arg Leu Thr  
805 810 815

Lys Pro Lys Lys Glu His Gly Ser Gly Leu Ser Phe Asp Leu Asn Gln  
820 825 830

Ala Ala Asp Thr Asp Asp Gly Ser His Asn Thr Ser Asp Leu Thr Thr  
835 840 845

Asp Asn Asp Gln Asp Glu Gln Gly Phe Ser Gly Lys Leu Ser Leu Gln  
850 855 860

Cys Val Pro Phe Ala Phe His Asp Met Val Ser Arg Val Asp Asp Ala  
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Val Ala Phe Arg Ala Val Asp Phe Ala Ala Val Arg Arg Arg Ile Thr  
885 890 895

Glu Thr Leu Ser Glu Arg Phe Glu Thr Ile Ile Gly Glu Ser Leu Ser  
900 905 910

Val Glu Val Glu Glu Glu Ala Leu Gln Arg Ile Leu Ser Gly Val Trp  
915 920 925

Leu Gly Gln Thr Glu Leu Glu Glu Trp Ile Glu Lys Ala Ile Val Pro  
930 935 940

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&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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&lt;211&gt; 726

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1014

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Ile Cys Gln Ser Gln Ile Ser Phe Leu Pro Leu Val Glu Val Lys Ser
35      40      45

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Arg Leu Arg Leu Ala Ala Leu Leu Leu Arg Tyr Ser His Asn Val Asn
50      55      60

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His Ala Lys Ser His Leu Glu Arg Ser Leu Leu Leu Lys Ser Ile
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Pro Ser Ser Tyr Asp Leu Lys Phe Gln Asn Tyr Ser Leu Leu Ser His
85      90      95

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Cys Tyr His Leu Leu Ala Ser Phe Pro Pro Gln Arg Asn Leu Leu Val
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Lys Ala Leu Glu Leu Ala Ser Ser Val Pro Gln Asp Ile Ser Ala Tyr
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 Ser Met Leu His Val His Ile Met Gln Trp Thr Asp Asp Tyr Ser Val  
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 Glu Lys Ala Val Gln Arg Cys Asp Glu Ile Trp Gln Thr Ile Ser Ser  
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 Asp Lys Thr Asp Arg Cys Pro Gly Leu Phe Phe Tyr Asn Glu Met Leu  
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 225 230 235 240  
 His Val Asp Arg Leu Asp Gln Ala Met Asn Ala His Ser His Lys Met  
 245 250 255  
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375

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Thr Asp Glu Val Arg Glu Ala Asp Leu Arg His Thr Ala Ile Trp Met  
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Ser Arg Val Phe Leu Met Leu Gln Met Gln Phe Leu Glu Asn Arg Val  
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Ser Glu Cys Met Ile Glu Met Leu Arg Gly Gln Tyr Ser His Ser Val  
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Ser Tyr Leu Thr Ile Gly Asp Ala Glu Ser Ser Ser Lys Ala Leu Asp  
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Arg Asp Leu Gln Glu Ala Arg Asn Arg Leu Ala Lys Gly Leu Gln Ile  
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Ala His Asn His Met Gly Asn Leu Gln Leu Val Ala Gln Tyr Leu Thr  
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Leu Leu Gly Asn Leu Ala Leu Ser Leu His Asp Thr Val Gln Ala Arg  
 580 585 590

Glu Ile Leu Arg Ser Ser Leu Thr Leu Ala Lys Lys Leu Tyr Asp Ile  
 595 600 605

Pro Thr Gln Leu Trp Val Leu Ser Ile Phe Thr Ala Leu Tyr Gln Gln  
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Leu Gly Glu Lys Gly Asn Glu Met Glu Asn Glu Glu Phe Arg Lys Lys  
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Lys Trp Asp Glu Leu Gln Ser Arg Leu Ala Glu Ala Arg Gly Ser Ile  
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His His Ile Glu Leu Val Ala Lys Ala Arg Ile Glu Leu Tyr Gln Ile  
660 665 670

Asp Asn Asn Pro Gln Glu Gln Ser Leu Val Ala Ser Ala Gln Ser Met  
675 680 685

Gln Gly Asn Leu Asp Ile Pro Glu Ser Val Gly Ile Glu Gly Pro Ser  
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<211> 86

<212> PRT

<213> Arabidopsis thaliana

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1

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20 25 30

Thr Tyr Leu Gly Glu Val Thr Val Tyr Tyr Pro Cys Arg Glu Arg Asp  
35 40 45

Cys Glu Ala Gln Cys Tyr Glu His Tyr Pro His Ser Cys Lys Gly Glu  
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Cys Glu His His Asp His Val Val His His Asp Asn Glu Glu Glu His  
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Glu Ile Gln Lys His Asn Arg Arg Thr Lys Arg Glu Thr Glu Ser Glu  
 50 55 60

Ala Glu Val Tyr Thr Glu Ala Gln Lys Gln Ser Met Glu Glu Glu Ala  
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 Val Asp Val Glu Glu Phe Asp Leu Asp Lys Glu Phe Asp Pro Ala Lys  
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 Gly Leu Leu Lys Glu Leu Leu Lys Val Ile Glu Arg Met Arg Gln Lys  
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Lys Asn Gly Leu Arg Pro Asn Gly Ala Thr Tyr Gly Leu Ala Met Glu  
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Val Met Leu Glu Ser Gly Lys Phe Asp Arg Val His Asp Phe Phe Arg  
385 390 395 400

Lys Met Lys Ser Ser Gly Glu Ala Pro Lys Ala Ile Thr Tyr Lys Val  
405 410 415

Leu Val Arg Ala Leu Trp Arg Glu Gly Lys Ile Glu Glu Ala Val Glu  
420 425 430

Ala Val Arg Asp Met Glu Gln Lys Gly Val Ile Gly Thr Gly Ser Val  
435 440 445

Tyr Tyr Glu Leu Ala Cys Cys Leu Cys Asn Asn Gly Arg Trp Cys Asp  
450 455 460

Ala Met Leu Glu Val Gly Arg Met Lys Arg Leu Glu Asn Cys Arg Pro  
465 470 475 480

Leu Glu Ile Thr Phe Thr Gly Leu Ile Ala Ala Ser Leu Asn Gly Gly  
485 490 495

His Val Asp Asp Cys Met Ala Ile Phe Gln Tyr Met Lys Asp Lys Cys  
500 505 510

Asp Pro Asn Ile Gly Thr Ala Asn Met Met Leu Lys Val Tyr Gly Arg  
515 520 525

Asn Asp Met Phe Ser Glu Ala Lys Glu Leu Phe Glu Glu Ile Val Ser  
530 535 540

Arg Lys Glu Thr His Leu Val Pro Asn Glu Tyr Thr Tyr Ser Phe Met  
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Leu Glu Ala Ser Ala Arg Ser Leu Gln Trp Glu Tyr Phe Glu His Val  
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Tyr Gln Thr Met Val Leu Ser Gly Tyr Gln Met Asp Gln Thr Lys His  
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Arg Gly Val Glu Asp Leu Ala Asp Ala Val Lys Val Thr Met Gly Pro  
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Lys Gly Arg Asn Val Ile Ile Glu Gln Ser Trp Gly Ala Pro Lys Val  
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Thr Lys Asp Gly Val Thr Val Ala Lys Ser Ile Glu Phe Lys Asp Arg  
 85 90 95

Ile Lys Asn Val Gly Ala Ser Leu Val Lys Gln Val Ala Asn Ala Thr  
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Asn Asp Val Ala Gly Asp Gly Thr Thr Cys Ala Thr Val Leu Thr Arg  
 Page 1559

115

120

125

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Asn Leu Gln Ser Arg Ala Arg Met Ile Ser Thr Ser Glu Glu Ile Ala  
 165 170 175

Gln Val Gly Thr Ile Ser Ala Asn Gly Asp Arg Glu Ile Gly Glu Leu  
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Lys Ile Asp Arg Gly Tyr Ile Ser Pro Tyr Phe Ile Thr Asn Pro Lys  
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Thr Gln Lys Cys Glu Leu Glu Asp Pro Leu Ile Leu Ile His Glu Lys  
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Lys Lys Gln Arg Pro Leu Leu Ile Val Ala Glu Asp Val Glu Ser Asp  
 275 280 285

Ala Leu Ala Thr Leu Ile Leu Asn Lys Leu Arg Ala Asn Ile Lys Val  
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Cys Ala Val Lys Ala Pro Gly Phe Gly Glu Asn Arg Lys Ala Asn Leu  
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His Asp Leu Ala Ala Leu Thr Gly Ala Gln Val Ile Thr Glu Glu Leu  
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Gly Met Asn Leu Asp Asn Ile Asp Leu Ser Met Phe Gly Asn Cys Lys  
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Lys Val Thr Val Ser Lys Asp Asp Thr Val Val Leu Asp Gly Ala Gly  
 355 360 365

Asp Lys Gln Ala Ile Gly Glu Arg Cys Glu Gln Ile Arg Ser Met Val  
 370 375 380

Glu Ala Ser Thr Ser Asp Tyr Asp Lys Glu Lys Leu Gln Glu Arg Leu  
 385 390 395 400

Ala Lys Leu Ser Gly Gly Val Ala Val Leu Lys Ile Gly Gly Ala Ser  
 405 410 415

Glu Thr Glu Val Ser Glu Lys Lys Asp Arg Val Thr Asp Ala Leu Asn  
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Ala Thr Lys Ala Ala Val Glu Glu Gly Ile Val Pro Gly Gly Gly Val  
 435 440 445

Ala Leu Leu Tyr Ala Ser Lys Glu Leu Glu Lys Leu Ser Thr Ala Asn  
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Phe Asp Gln Lys Ile Gly Val Gln Ile Ile Gln Asn Ala Leu Lys Thr  
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Pro Val Tyr Thr Ile Ala Ser Asn Ala Gly Val Glu Gly Ala Val Val  
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Val Gly Lys Leu Leu Glu Gln Asp Asn Pro Asp Leu Gly Tyr Asp Ala  
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Ala Lys Gly Glu Tyr Val Asp Met Ile Lys Ala Gly Ile Ile Asp Pro  
 515 520 525

Leu Lys Val Ile Arg Thr Ala Leu Val Asp Ala Ala Ser Val Ser Ser  
 530 535 540

Leu Leu Thr Thr Thr Glu Ala Val Val Thr Glu Ile Pro Thr Lys Glu  
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<211> 1191

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<213> Arabidopsis thaliana

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Val Pro Leu Asp Pro Glu Ala Ile Asp Cys Asp Trp Trp Asp Thr Phe  
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Trp Leu Arg Asn Ser Ser Pro Ser Val Pro Ser Asp Glu Asp Tyr Ala  
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Phe Lys His Phe Phe Arg Ala Ser Lys Thr Thr Phe Ser Tyr Ile Cys  
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Ser Leu Val Arg Glu Asp Leu Ile Ser Arg Pro Pro Ser Gly Leu Ile  
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Asn Ile Glu Gly Arg Leu Leu Ser Val Glu Lys Gln Val Ala Ile Ala  
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Leu Arg Arg Leu Ala Ser Gly Asp Ser Gln Val Ser Val Gly Ala Ala  
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Phe Gly Val Gly Gln Ser Thr Val Ser Gln Val Thr Trp Arg Phe Ile  
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Glu Ala Leu Glu Glu Arg Ala Lys His His Leu Arg Trp Pro Asp Ser  
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Asp Arg Ile Glu Glu Ile Lys Ser Lys Phe Glu Glu Met Tyr Gly Leu  
165 170 175

Pro Asn Cys Cys Gly Ala Ile Asp Thr Thr His Ile Ile Met Thr Leu  
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Pro Ala Val Gln Ala Ser Asp Asp Trp Cys Asp Gln Glu Lys Asn Tyr  
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Ser Met Phe Leu Gln Gly Val Phe Asp His Glu Met Arg Phe Leu Asn  
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Met Val Thr Gly Trp Pro Gly Gly Met Thr Val Ser Lys Leu Leu Lys  
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Asn Pro Lys Thr Leu Ser Gln Gly Ala Gln Ile Arg Glu Tyr Val Val  
260 265 270

Gly Gly Ile Ser Tyr Pro Leu Leu Pro Trp Leu Ile Thr Pro His Asp

Ser Asp His Pro Ser Asp Ser Met Val Ala Phe Asn Glu Arg His Glu  
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Lys Val Arg Ser Val Ala Ala Thr Ala Phe Gln Gln Leu Lys Gly Ser  
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Trp Arg Ile Leu Ser Lys Val Met Trp Arg Pro Asp Arg Arg Lys Leu  
325 330 335  
Pro Ser Ile Ile Leu Val Cys Cys Leu Leu His Asn Ile Ile Asp  
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Cys Gly Asp Tyr Leu Gln Glu Asp Val Pro Leu Ser Gly His His Asp  
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<213> Arabidopsis thaliana

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35 40 45

Gly Lys Lys Gly Ile Trp Ile Lys Leu Pro Leu Gly Leu Ala Asn Leu  
50 55 60

Val Glu Ala Ala Val Ser Glu Gly Phe Arg Tyr His His Ala Glu Pro  
65 70 75 80

Glu Tyr Leu Met Leu Val Ser Trp Ile Ser Glu Thr Pro Asp Thr Ile  
85 90 95

Pro Ala Asn Ala Ser His Val Val Gly Ala Gly Ala Leu Val Ile Asn  
100 105 110

Lys Asn Thr Lys Glu Val Leu Val Val Gln Glu Arg Ser Gly Phe Phe  
115 120 125

Lys Asp Lys Asn Val Trp Lys Leu Pro Thr Gly Val Ile Asn Glu Gly  
130 135 140

Glu Asp Ile Trp Thr Gly Val Ala Arg Glu Val Glu Glu Glu Thr Gly  
145 150 155 160

Ile Ile Ala Asp Phe Val Glu Val Leu Ala Phe Arg Gln Ser His Lys  
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Ala Ile Leu Lys Lys Lys Thr Asp Met Phe Phe Leu Cys Val Leu Ser  
180 185 190

Pro Arg Ser Tyr Asp Ile Thr Glu Gln Lys Ser Glu Ile Leu Gln Ala  
195 200 205

Lys Trp Met Pro Ile Gln Glu Tyr Val Asp Gln Pro Trp Asn Lys Lys  
210 215 220

Asn Glu Met Phe Lys Phe Met Ala Asn Ile Cys Gln Lys Lys Cys Glu  
225 230 235 240

Glu Glu Tyr Leu Gly Phe Ala Ile Val Pro Thr Thr Thr Ser Ser Gly  
245 250 255

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<213> Arabidopsis thaliana

<400> 1026

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Pro Ile Thr Ser Phe Asn Asp Met Gly Ile Lys Glu Asp Val Leu Arg  
 35 40 45

Gly Val Tyr Glu Tyr Gly Phe Glu Lys Pro Ser Ala Ile Gln Gln Arg  
 50 55 60

Ala Val Met Pro Ile Leu Gln Gly Arg Asp Val Ile Ala Gln Ala Gln  
 65 70 75 80

Ser Gly Thr Gly Lys Thr Ser Met Ile Ala Leu Ser Val Cys Gln Val  
 85 90 95

Val Asp Thr Ser Ser Arg Glu Val Gln Ala Leu Ile Leu Ser Pro Thr  
 100 105 110

Arg Glu Leu Ala Thr Gln Thr Glu Lys Thr Ile Gln Ala Ile Gly Leu  
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His 130	Asn	Ile	Gln	Ala	His 135	Ala	Cys	Ile	Gly	Gly 140	Asn	Ser	Val	Gly
Glu 145	Asp	Ile	Arg	Lys	Leu 150	Glu	His	Gly	Val	His 155	Val	Val	Ser	Thr 160
Pro	Gly	Arg	Val	Cys 165	Asp	Met	Ile	Lys	Arg 170	Arg	Ser	Leu	Arg	Thr 175
Ala	Ile	Lys	Leu 180	Leu	Ile	Leu	Asp	Glu 185	Ser	Asp	Glu	Met	Leu 190	Arg
Gly	Phe	Lys 195	Asp	Gln	Ile	Tyr	Asp 200	Val	Tyr	Arg	Tyr	Leu 205	Pro	Asp
Leu	Gln 210	Val	Cys	Leu	Val	Ser 215	Ala	Thr	Leu	Pro	His 220	Glu	Ile	Glu
Met 225	Thr	Ser	Lys	Phe	Met 230	Thr	Glu	Pro	Val	Lys 235	Ile	Leu	Val	Arg 240
Asp	Glu	Leu	Thr	Leu 245	Glu	Gly	Ile	Lys	Gln 250	Phe	Phe	Val	Ala	Glu 255
Lys	Glu	Glu	Trp 260	Lys	Phe	Asp	Thr	Leu 265	Cys	Asp	Leu	Tyr	Asp 270	Leu
Thr	Ile	Thr 275	Gln	Ala	Val	Ile	Phe 280	Cys	Asn	Thr	Lys	Arg 285	Lys	Asp
Tyr	Leu 290	Ser	Glu	Lys	Met 295	Arg	Ser	His	Asn	Phe	Thr 300	Val	Ser	Met
His 305	Gly	Asp	Met	Pro	Gln 310	Lys	Glu	Arg	Asp	Ala 315	Ile	Met	Asn	Phe 320
Arg	Ser	Gly	Asp	Ser 325	Arg	Val	Leu	Ile	Thr 330	Thr	Asp	Val	Trp	Arg 335
Gly	Ile	Asp	Val 340	Gln	Gln	Val	Ser	Leu 345	Val	Ile	Asn	Tyr	Asp 350	Pro
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Gly Arg Lys Gly Val Ala Ile Asn Phe Val Lys Ser Asp Asp Ile Lys  
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Tyr Ser Glu Met Val Gly Val Met Ala Arg Asp Ile Lys Glu Phe Lys  
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Gly Ala Val Ala Cys Ile Asp Val Leu His His Gln Lys Leu Leu Ser  
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Ala Leu Phe Arg Met Lys Leu Trp Asp His Arg Pro Asp Val Met Asp  
100 105 110



Ala Leu Val Asn Leu Val Ile Ser 115 120 Leu Ala Val Thr Ser Gly Lys Tyr 125  
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 Val Pro Leu Thr Pro Ser Arg Leu Val Pro Met Leu Phe Gln Gln Met 180 185 190  
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Phe Arg Ser Gln Leu Thr Pro Leu Glu Ser Ile Leu Met His Lys Leu  
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Asn Pro Leu Met Val Cys Leu Pro Ser Val Val Ala Glu Phe Leu Arg  
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Gln Ala Lys Glu Gly Gly Leu Phe Ile Val Ser Asp Ser Phe Ile Phe  
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Arg Leu Asp Thr Phe Phe Pro Phe Asp Pro Cys Leu Leu Lys Ser Ser  
515 520 525

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Thr Tyr Asp Glu Asp Asp Asp Asp Asn Asp Ala Glu Val Ile Val Asn  
545 550 555 560

Gly Asp Glu Asp Ser Asp Glu Asp Asp Glu Ala Asp Leu Asp Tyr Ala  
565 570 575

Leu Asn Lys Met Ser Ile Thr Pro Lys His Ser Phe Lys Asn Lys Met  
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Ser Pro Glu Ser Leu  
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&lt;211&gt; 1014

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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&lt;211&gt; 337

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1030

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Ile Leu Ile Ala Arg Lys Asn Leu Ile Ser Asn Ile Ala Ala Leu Leu  
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115 120 125

Leu Val Pro Val Glu Ser Tyr His Leu His Asn Ile Ser Gln Gly Val  
130 135 140

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145 150 155 160

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165 170 175

Tyr Ser Glu Ile His Asp Asn Pro Gln Ile Ser Glu Glu Asp Ile Arg  
180 185 190

Ser Leu Pro Ala Gly Asp Leu Lys Tyr Val Gly Ala Asn Ala Leu Met  
195 200 205

Ala Trp Glu Lys Val Arg Ala Gly Val Lys Lys Leu Leu Leu Val Tyr  
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Pro Ser Lys Val Cys Lys Arg Cys Lys Glu Val His Val Gly Pro Ser  
225 230 235 240

Gly His Lys Ala Arg Leu Cys Gly Val Phe Lys Tyr Glu Ser Trp Arg  
245 250 255

Gly Thr His Tyr Trp Glu Lys Ala Gly Val Asn Asp Leu Val Pro Glu  
260 265 270

Lys Met Val Trp His Arg Arg Pro Gln Asp Pro Val Val Leu Val Asp  
 275 280 285

Glu Gly Arg Ser Tyr Tyr Gly His Ala Pro Ala Ile Val Ser Leu Cys  
 290 295 300

Ser His Thr Gly Ala Ile Val Pro Val Lys Tyr Ala Cys Lys Met Lys  
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Thr

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<211> 1296

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 1032

&lt;211&gt; 431

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1032

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35     40     45
Lys Asp Ser Val Ser Ser Ser Glu Asn Ser Asp His Leu Pro Lys Glu
50     55     60
Ile Arg Glu Asp Met Asp Cys Gly Ile Ile Lys Gly Asn Gly Thr Glu
65     70     75     80
Ser Gly Arg Ile Ile Thr Thr Lys Lys Lys Gly Leu Asn Asp Gln Lys
85     90     95
Asp Lys Thr Ile Ser Tyr Arg Ala Glu His Val Ile Gly Thr Gly Ser
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115    120    125
Ala Ile Lys Lys Val Leu Gln Asp Lys Arg Tyr Lys Asn Arg Glu Leu
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180 185 190

Lys Met Asn Gln His Met Pro Leu Ile Tyr Ile Gln Leu Tyr Thr Tyr  
195 200 205

Gln Ile Cys Arg Ala Met Asn Tyr Leu His Gln Val Val Gly Val Cys  
210 215 220

His Arg Asp Ile Lys Pro Gln Asn Leu Leu Val Asn Asn Val Thr His  
225 230 235 240

Glu Val Lys Ile Cys Asp Phe Gly Ser Ala Lys Met Leu Ile Pro Gly  
245 250 255

Glu Pro Asn Ile Ser Tyr Ile Cys Ser Arg Tyr Tyr Arg Ala Pro Glu  
260 265 270

Leu Ile Phe Gly Ala Thr Glu Tyr Thr Ser Ala Ile Asp Met Trp Ser  
275 280 285

Val Gly Cys Val Met Ala Glu Leu Phe Leu Gly His Pro Leu Phe Pro  
290 295 300

Gly Glu Thr Ser Val Asp Gln Leu Val Glu Ile Ile Lys Ile Leu Gly  
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Thr Pro Ala Arg Glu Glu Ile Lys Asn Met Asn Pro Arg Tyr Asn Asp  
325 330 335

Phe Lys Phe Pro Gln Ile Lys Ala Gln Pro Trp His Lys Ile Phe Arg  
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Arg Gln Val Ser Pro Glu Ala Met Asp Leu Ala Ser Arg Leu Leu Gln  
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Tyr Ser Pro Asn Leu Arg Cys Thr Ala Leu Glu Ala Cys Ala His Pro  
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Phe Phe Asp Asp Leu Arg Asp Pro Arg Ala Ser Leu Pro Asn Gly Arg  
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<213> Arabidopsis thaliana

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 Thr Thr Lys Thr Val Ser Tyr Glu Ser Glu Gln Leu Glu Lys Ser Cys  
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 Ser Gln Asn Ser Lys Lys Arg Arg Arg Glu Thr Ser Pro Ala Val Val  
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<213> Arabidopsis thaliana

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50      55      60
His Phe Ala Gln Arg Trp Lys Gly Glu Ser Leu Arg Glu Ser Ile Lys
65      70      75      80
Arg His Glu His Phe Leu Ala Leu Gln Leu Gly Ile Gln Pro Gly Gln
85      90      95
Lys Val Leu Asp Val Gly Cys Gly Ile Gly Gly Pro Leu Arg Glu Ile
100      105      110
Ala Arg Phe Ser Asn Ser Val Val Thr Gly Leu Asn Asn Asn Glu Tyr
115      120      125
Gln Ile Thr Arg Gly Lys Glu Leu Asn Arg Leu Ala Gly Val Asp Lys
130      135      140
Thr Cys Asn Phe Val Lys Ala Asp Phe Met Lys Met Pro Phe Pro Glu
145      150      155      160
Asn Ser Phe Asp Ala Val Tyr Ala Ile Glu Ala Thr Cys His Ala Pro
165      170      175
Asp Ala Tyr Gly Cys Tyr Lys Glu Ile Tyr Arg Val Leu Lys Pro Gly
180      185      190
Gln Cys Phe Ala Ala Tyr Glu Trp Cys Met Thr Asp Ala Phe Asp Pro
195      200      205
Asp Asn Ala Glu His Gln Lys Ile Lys Gly Glu Ile Glu Ile Gly Asp
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225      230      235      240

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260 265 270

Ser Phe Arg Leu Thr Ala Val Gly Arg Phe Ile Thr Lys Asn Met Val  
275 280 285

Lys Ile Leu Glu Tyr Ile Arg Leu Ala Pro Gln Gly Ser Gln Arg Val  
290 295 300

Ser Asn Phe Leu Glu Gln Ala Ala Glu Gly Leu Val Asp Gly Gly Arg  
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 35 40 45

Pro Ser Thr Pro Ile Pro Tyr Ser Lys Asp Pro Tyr Phe Ala Val His  
 50 55 60

Lys Leu Ile Leu Gly Thr His Thr Ser Gly Gly Ala Gln Asp Phe Leu  
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Met Val Ala Asp Val Val Ile Pro Thr Pro Asp Ala Glu Pro Gly Leu  
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Gly Gly Arg Asp Gln Glu Pro Ile Val Pro Lys Val Glu Ile Lys Gln  
 100 105 110

Lys Ile Arg Val Asp Gly Glu Val Asn Arg Ala Arg Cys Met Pro Gln  
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Lys Pro Thr Leu Val Gly Ala Lys Thr Ser Gly Ser Glu Val Phe Leu  
 Page 1583

130

135

140

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 Asp Phe Ala Trp Asn Lys Asp Glu Pro Trp Val Ile Ser Ser Val Ala  
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Ser Val Arg Cys Pro Lys Val Ala Ala Phe Pro Cys Phe Thr Ser Ile  
20 25 30

Leu Ser Lys Gly Gly Glu Val Val Asp Asn Glu Glu Val Ile His Ala  
35 40 45

Leu Gly Asp Ala Phe Leu His Pro Glu Phe Thr Val Pro Leu Val His  
50 55 60

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Cys Phe Leu Pro Ile Ile Arg Asn Val Val Asp Arg Val Val Gly Leu  
 65 70 75 80  
 Leu Arg Leu Val Asp Asp Leu Lys Ser Ser Ile Asp Tyr Ser Asp Asp  
 85 90 95  
 Val Ser Ser Val Leu Asp Asn Ala Met Thr Glu Gly Ile Ser Val Ile  
 100 105 110  
 Asp Phe Tyr Val Arg Arg Gly Gln Arg Leu Glu Leu His Glu Cys Ala  
 115 120 125  
 Cys Leu Ala Phe Ser Arg Ala Leu His Phe Asn Thr Ser Leu Leu Gly  
 130 135 140  
 Ser Ile Leu Asn Tyr Phe Glu Lys Ala Pro Pro Pro Tyr Glu Arg Ile  
 145 150 155 160  
 Leu Val Lys Asp Ile Val Ser Glu Ser Arg Met Glu Ala Thr Asp Ala  
 165 170 175  
 Tyr Leu Leu Cys Leu Arg Val Ser Tyr Arg Phe Leu Val Ile Arg Pro  
 180 185 190  
 Glu Val Phe Ser Lys Leu Trp Asp Trp Ser Cys Tyr Leu Asp Ser Met  
 195 200 205  
 Lys Arg Leu Ser Glu Cys Pro Arg Gln Gln Arg His Phe Leu Glu Lys  
 210 215 220  
 Tyr Arg Asp Ala Val Trp Asp Val Asn Ser Phe Ser Glu Pro Phe Glu  
 225 230 235 240  
 Ile His Ser Arg Val Lys Lys Ser Phe Glu Met Val Ser Leu Ala Val  
 245 250 255  
 Ser Gln Lys Arg Pro Val Leu Leu Tyr Gly Pro Ser Gly Ser Gly Lys  
 260 265 270  
 Ser Ala Leu Ile Arg Lys Leu Ala Asp Glu Ser Gly Asn His Val Val  
 275 280 285  
 Phe Ile His Met Asp Asp Gln Leu Asp Gly Lys Thr Leu Val Gly Thr  
 290 295 300  
 Tyr Val Cys Thr Asp Gln Pro Gly Glu Phe Arg Trp Gln Pro Gly Ser  
 305 310 315 320



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Leu Thr Gln Ala Ile Met Asn Gly Phe Trp Val Val Leu Glu Asp Ile  
 325 330 335  
 Asp Lys Ala Pro Ser Asp Val Pro Leu Val Leu Ser Ser Leu Leu Gly  
 340 345 350  
 Gly Ser Cys Ser Phe Leu Thr Ser Gln Gly Glu Glu Ile Arg Ile Ala  
 355 360 365  
 Glu Thr Phe Gln Leu Phe Ser Thr Ile Ser Thr Pro Glu Cys Ser Val  
 370 375 380  
 Ser His Ile Arg Asp Ala Gly Asn Ser Leu Ser Pro Leu Trp Arg Arg  
 385 390 395 400  
 Ile Val Val Tyr Pro Pro Asp Arg Glu Ser Leu Gln Ser Ile Leu Gly  
 405 410 415  
 Ala Arg Tyr Pro Asn Leu Gly Pro Val Ala Glu Lys Leu Ile Glu Thr  
 420 425 430  
 Phe Glu Thr Ile Asn Ser Ala Leu Arg Pro Gln Phe Ser Ser Ser Thr  
 435 440 445  
 Thr Glu Asn Ser Ala Thr Phe Ser Ser Pro Ser Arg Phe Ser Leu Arg  
 450 455 460  
 Asp Leu Leu Lys Trp Cys Glu Arg Val His Gly Leu Pro Ser Tyr Asp  
 465 470 475 480  
 Gly His Ala Val Tyr Gln Glu Ala Ala Asp Ile Phe Ser Ala Ser Asn  
 485 490 495  
 Met Ser Val Lys Asn Arg Val Ala Val Ser Glu Ile Val Ala Ser Ile  
 500 505 510  
 Trp Asn Val Ala Val Pro Glu Ser Gln Asp Lys Pro Pro Ile Gln Ser  
 515 520 525  
 His Asp Arg Ser Arg Phe Val Glu Thr Arg Thr Ser Thr Arg Leu Leu  
 530 535 540  
 Glu Lys Ile Ala Arg Ser Val Glu Tyr Asn Glu Pro Val Leu Leu Val  
 545 550 555 560  
 Gly Glu Thr Gly Thr Gly Lys Thr Thr Leu Val Gln Asn Leu Ala His

Trp Ile Gly Gln Lys Leu Thr Val Leu Asn Leu Ser Gln Gln Ser Asp  
 580 585 590  
 Ile Val Asp Leu Leu Gly Gly Phe Lys Pro Ile Asp Pro Lys Leu Met  
 595 600 605  
 Cys Thr Met Val Tyr Asn Glu Phe Asn Glu Leu Ala Arg Asp Leu Lys  
 610 615 620  
 Ile Lys Asp Asp Ser Lys Ile Met Lys Trp Leu Gln Asp Asn Phe Arg  
 625 630 635 640  
 Ala Lys Lys Trp His Thr Phe Leu Thr Gly Leu Leu Asp Ile Ile Lys  
 645 650 655  
 Gly Ile Glu Gly Arg Ile Thr Glu Arg Met Glu Gly Lys Ile Gly Glu  
 660 665 670  
 Ala Arg Ser Arg Ser Gly Arg Lys Arg Lys Lys Pro Glu Glu Glu Leu  
 675 680 685  
 Lys Asn Cys Ala Cys Leu Arg Thr Lys Val Asn Lys Ile Arg Gln Gln  
 690 695 700  
 Ile His Ser Gly Gly Met Val Phe Thr Phe Val Glu Gly Ala Phe Val  
 705 710 715 720  
 Thr Ala Leu Arg Glu Gly His Trp Val Leu Leu Asp Glu Val Asn Leu  
 725 730 735  
 Ala Pro Pro Glu Ile Leu Gly Arg Leu Ile Gly Val Leu Glu Gly Val  
 740 745 750  
 Arg Gly Ser Leu Cys Leu Ala Glu Arg Gly Asp Val Met Gly Ile Pro  
 755 760 765  
 Arg His Leu Asn Phe Arg Leu Phe Ala Cys Met Asn Pro Ala Thr Asp  
 770 775 780  
 Ala Gly Lys Arg Asp Leu Pro Phe Ser Phe Arg Ser Arg Phe Thr Glu  
 785 790 795 800  
 Tyr Ala Val Asp Asp Ile Cys Asp Asp Asp Leu Glu Ile Phe Val  
 805 810 815

Arg Arg Phe Leu Gly Gly Arg Gly Ser Asp Ser Lys Leu Val Ala Asn  
 820 825 830

Ile Val Trp Phe Tyr Lys Glu Ala Lys Arg Leu Ser Glu Glu Ser Leu  
 835 840 845

Gln Asp Gly Ala Asn Gln Lys Pro Gln Tyr Ser Leu Arg Ser Leu Tyr  
 850 855 860

Arg Ala Leu Glu Tyr Ala Ile Lys Ala Glu Ala Ile Gly Gly Phe Gln  
 865 870 875 880

Lys Ala Leu Tyr Asp Gly Phe Ser Met Phe Phe Leu Ser Leu Leu Asp  
 885 890 895

Ala Ser Ser Ala Lys Ile Val Glu Pro Ile Ile Lys Arg Ile Ser Gly  
 900 905 910

Glu Asn Ile Arg Ser Gln Pro Leu Gln Arg Tyr Leu Gly Glu Leu Lys  
 915 920 925

Gly Ser Ser Asp Lys Phe Val Gly Ser Tyr Val Lys Thr Lys Ser Val  
 930 935 940

Ile Asp His Leu Asn His Leu Ala His Ala Ile Phe Ile Lys Arg Tyr  
 945 950 955 960

Pro Val Leu Leu Gln Gly Pro Thr Ser Ser Gly Lys Thr Ser Leu Val  
 965 970 975

Lys Tyr Leu Ala Ala Ile Ser Gly Asn Lys Phe Val Arg Ile Asn Asn  
 980 985 990

His Glu Gln Thr Asp Ile Gln Glu Tyr Leu Gly Ser Tyr Met Thr Asp  
 995 1000 1005

Ser Ser Gly Lys Leu Val Phe His Glu Gly Ala Leu Val Lys Ala  
 1010 1015 1020

Val Arg Gly Gly His Trp Ile Val Leu Asp Glu Leu Asn Leu Ala  
 1025 1030 1035

Pro Ser Asp Val Leu Glu Ala Leu Asn Arg Leu Leu Asp Asp Asn  
 1040 1045 1050

Arg Glu Leu Phe Val Pro Glu Leu Ser Glu Thr Ile Ser Ala His  
 1055 1060 1065

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Pro	Asn	Phe	Met	Leu	Phe	Ala	Thr	Gln	Asn	Pro	Thr	Leu	Tyr
	1070					1075					1080		
Gly	Gly	Arg	Lys	Ile	Leu	Ser	Arg	Ala	Phe	Arg	Asn	Arg	Phe
	1085					1090					1095		Val
Glu	Ile	His	Val	Asp	Glu	Ile	Pro	Glu	Asp	Glu	Leu	Ser	Glu
	1100					1105					1110		Ile
Leu	Thr	Thr	Lys	Cys	Ser	Ile	Ala	Asn	Ser	His	Ala	Ser	Lys
	1115					1120					1125		Met
Val	Glu	Val	Met	Lys	Asp	Leu	Gln	Arg	Asn	Arg	Gln	Ser	Ser
	1130					1135					1140		Lys
Ala	Phe	Ala	Gly	Lys	His	Gly	Tyr	Ile	Thr	Pro	Arg	Asp	Leu
	1145					1150					1155		Phe
Arg	Trp	Ala	Tyr	Arg	Phe	Arg	Thr	Tyr	Asp	Gly	Thr	Ser	His
	1160					1165					1170		Glu
Glu	Leu	Ala	Arg	Glu	Gly	Tyr	Tyr	Ile	Leu	Ala	Glu	Arg	Leu
	1175					1180					1185		Arg
Asp	Asp	Thr	Glu	Lys	Val	Val	Val	Gln	Glu	Val	Leu	Glu	Arg
	1190					1195					1200		His
Phe	Arg	Val	Ser	Leu	Ala	Lys	Asp	Asp	Leu	Tyr	Asn	Met	Gly
	1205					1210					1215		Phe
Phe	Pro	Val	Arg	Asp	Arg	Ser	Lys	Leu	Ile	Thr	Glu	Tyr	Glu
	1220					1225					1230		Asn
Gln	Val	Lys	Gln	Leu	Glu	Leu	Ser	Gln	Ala	Leu	Thr	Pro	Phe
	1235					1240					1245		Gly
Gln	Asp	Ile	Val	Ile	Cys	Gly	Asp	Ile	Ser	Arg	Ala	Glu	Val
	1250					1255					1260		Ser
Ile	Lys	Ser	Val	Glu	Val	Ala	Leu	Glu	Lys	Tyr	Lys	Asn	Gly
	1265					1270					1275		Ser
Val	Ile	Gly	Val	Ala	Ala	Thr	Pro	Gln	Asp	Val	Asp	Phe	Leu
	1280					1285					1290		Glu
Lys	Ile	Arg	Asn	Asn	Met	Val	Met	Leu	Tyr	Gln	Lys	Trp	Arg
	1295					1300					1305		Ala

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Ile Phe Val Trp Gln Asp Gly Pro Leu Val Glu Ala Met Arg Ala  
1310 1315 1320

Gly Asn Ile Val Leu Val Asp Glu Ile Ser Leu Ala Asp Asp Ser  
1325 1330 1335

Val Leu Glu Arg Met Asn Ser Val Leu Glu Thr Asp Arg Lys Leu  
1340 1345 1350

Ser Leu Ala Glu Lys Gly Gly Pro Val Leu Glu Glu Val Val Ala  
1355 1360 1365

His Glu Asp Phe Phe Val Leu Ala Thr Met Asn Pro Gly Gly Asp  
1370 1375 1380

Tyr Gly Lys Lys Glu Leu Ser Pro Ala Leu Arg Asn Arg Phe Thr  
1385 1390 1395

Glu Ile Trp Val Pro Pro Ile Thr Asp Thr Glu Glu Leu Arg Ser  
1400 1405 1410

Ile Ala Phe Ser Gly Leu Ser Ser Leu Lys Glu Ser Asn Val Val  
1415 1420 1425

Asp Pro Ile Ile Asn Phe Trp Glu Trp Phe Asn Arg Leu His Thr  
1430 1435 1440

Gly Arg Thr Leu Thr Val Arg Asp Leu Leu Ser Trp Val Ala Phe  
1445 1450 1455

Val Asn Met Ala Thr Glu Ser Leu Gly Pro Ala Tyr Ala Ile Leu  
1460 1465 1470

His Gly Ala Phe Leu Val Leu Leu Asp Gly Leu Ser Leu Gly Thr  
1475 1480 1485

Gly Phe Ser Gly Arg Asp Gly Gln Asp Leu Arg Glu Lys Cys Phe  
1490 1495 1500

Ala Phe Leu Leu Gln Gln Leu Glu Leu Phe Ala Ser Asp Thr Leu  
1505 1510 1515

Pro Leu Glu Leu Ser Arg Met Glu Leu Tyr Gly Trp Gly Asp Ser  
1520 1525 1530

Lys Ala Ile Cys Glu Lys Ser Lys Ser Val Arg His Glu Gly Met  
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1540

Phe	Gly	Ile	Asp	Pro	Phe	Phe	Ile	Ser	Lys	Gly	Asp	Glu	Asn	Pro
	1550					1555					1560			
Glu	Ile	Gly	Gly	Phe	Glu	Phe	Leu	Ala	Pro	Thr	Thr	His	Arg	Asn
	1565					1570					1575			
Val	Leu	Arg	Val	Leu	Arg	Ala	Met	Gln	Leu	Ser	Lys	Pro	Ile	Leu
	1580					1585					1590			
Leu	Glu	Gly	Ser	Pro	Gly	Val	Gly	Lys	Thr	Ser	Leu	Ile	Leu	Ala
	1595					1600					1605			
Leu	Gly	Lys	Tyr	Ser	Gly	His	Lys	Val	Val	Arg	Ile	Asn	Leu	Ser
	1610					1615					1620			
Glu	Gln	Thr	Asp	Met	Met	Asp	Leu	Leu	Gly	Ser	Asp	Leu	Pro	Val
	1625					1630					1635			
Glu	Ser	Asp	Glu	Asp	Met	Lys	Phe	Ala	Trp	Ser	Asp	Gly	Ile	Leu
	1640					1645					1650			
Leu	Gln	Gly	Leu	Asn	Ala	Ile	Leu	Asp	His	Arg	Ala	Gln	Val	Phe
	1655					1660					1665			
Ile	Pro	Glu	Leu	Gly	Cys	Thr	Phe	Glu	Cys	Pro	Pro	Thr	Phe	Arg
	1670					1675					1680			
Val	Phe	Ala	Cys	Gln	Asn	Pro	Ser	Thr	Gln	Gly	Gly	Gly	Arg	Lys
	1685					1690					1695			
Gly	Leu	Pro	Lys	Ser	Phe	Leu	Asn	Arg	Phe	Thr	Lys	Val	Tyr	Val
	1700					1705					1710			
Asp	Glu	Leu	Val	Glu	Asp	Asp	Tyr	Leu	Phe	Ile	Cys	Arg	Ser	Leu
	1715					1720					1725			
Tyr	Pro	Ser	Val	Pro	Ser	Pro	Leu	Leu	Ser	Lys	Leu	Ile	Ala	Leu
	1730					1735					1740			
Asn	Arg	Gln	Leu	His	Asp	Gly	Thr	Met	Leu	Tyr	Arg	Lys	Phe	Gly
	1745					1750					1755			
His	Asp	Gly	Ser	Pro	Trp	Glu	Phe	Asn	Leu	Arg	Asp	Val	Ile	Arg
	1760					1765					1770			

Ser Cys Gln Phe Met Gln Glu Ala Ile His Asp Leu Glu Val Glu  
 1775 1780 1785  
 Ser Phe Leu Asn Val Leu Tyr Ile Gln Arg Met Arg Thr Ala Thr  
 1790 1795 1800  
 Asp Arg Lys Glu Val Leu Arg Ile Tyr Lys Ala Ile Phe Asp Lys  
 1805 1810 1815  
 Thr Pro Ser Ile Asn Pro Tyr Pro Arg Val Gln Leu Asn Pro Ala  
 1820 1825 1830  
 Tyr Leu Val Val Gly Thr Ala Ala Ile Lys Arg Asn Leu Asn Gln  
 1835 1840 1845  
 Ser Asn Ile Ala Ser Glu Gln Leu Lys Leu Leu Pro Glu Ile Arg  
 1850 1855 1860  
 Gln Asn Leu Glu Ala Val Ala His Cys Val Gln Asn Lys Trp Leu  
 1865 1870 1875  
 Cys Ile Leu Val Gly Pro Ser Ser Ser Gly Lys Thr Ser Val Ile  
 1880 1885 1890  
 Arg Ile Leu Ala Gln Leu Thr Gly Tyr Pro Leu Asn Glu Leu Asn  
 1895 1900 1905  
 Leu Ser Ser Ala Thr Asp Ser Ser Asp Leu Leu Gly Cys Phe Glu  
 1910 1915 1920  
 Gln Tyr Asn Ala Phe Arg Asn Phe Arg Leu Val Met Thr Arg Val  
 1925 1930 1935  
 Glu His Leu Val Asp Glu Tyr Asn Ser Leu Leu Leu Gln Ser Ser  
 1940 1945 1950  
 Gln Glu Ala Leu Phe Ser Asn Arg Ser Gly Leu Val Ser Arg Trp  
 1955 1960 1965  
 Leu Ser Tyr Leu Asn Lys Ile Asp Ser Ser Leu Val Glu Asn Pro  
 1970 1975 1980  
 Leu Phe Phe Leu Asn Asp Ser Glu Thr Leu Ser Thr Leu Glu Glu  
 1985 1990 1995  
 Val Val Glu Asp Leu Glu Gln Val Leu Lys Glu Gly Val Leu Pro  
 2000 2005 2010

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Val	Ser	Trp	Ser	Lys	Lys	Tyr	Leu	Glu	Gln	Ile	Ser	Lys	Thr	Ile
	2015					2020					2025			
Leu	Gln	Leu	Gln	Thr	His	Glu	Lys	Lys	Gln	Ser	Thr	Lys	Phe	Glu
	2030					2035					2040			
Trp	Val	Thr	Gly	Met	Leu	Ile	Lys	Ala	Ile	Glu	Lys	Gly	Glu	Trp
	2045					2050					2055			
Val	Val	Leu	Lys	Asn	Ala	Asn	Leu	Cys	Asn	Pro	Thr	Val	Leu	Asp
	2060					2065					2070			
Arg	Ile	Asn	Ser	Leu	Val	Glu	Pro	Cys	Gly	Ser	Ile	Thr	Ile	Asn
	2075					2080					2085			
Glu	Cys	Gly	Ile	Val	Asn	Gly	Glu	Pro	Val	Thr	Val	Val	Pro	His
	2090					2095					2100			
Pro	Asn	Phe	Arg	Leu	Phe	Leu	Ser	Val	Asn	Pro	Lys	Phe	Gly	Glu
	2105					2110					2115			
Val	Ser	Arg	Ala	Met	Arg	Asn	Arg	Gly	Val	Glu	Val	Phe	Met	Met
	2120					2125					2130			
Gly	Pro	His	Trp	Gln	Leu	Asn	Glu	Asp	Gly	Ser	Asn	Cys	Glu	Glu
	2135					2140					2145			
Leu	Val	Leu	Arg	Gly	Val	Glu	Arg	Phe	Leu	Ala	Leu	Ser	Gly	Ile
	2150					2155					2160			
Pro	Gly	Tyr	Lys	Leu	Val	Thr	Ser	Met	Ala	Lys	Ala	His	Val	His
	2165					2170					2175			
Ala	Trp	Leu	Asn	Gly	Gln	Ser	Phe	Gly	Val	Arg	Ile	Thr	Tyr	Leu
	2180					2185					2190			
Glu	Leu	Glu	Gln	Trp	Val	His	Leu	Phe	Gln	Leu	Leu	Leu	Met	Asn
	2195					2200					2205			
Gly	Asn	Gln	Leu	Leu	Trp	Ser	Leu	Gln	Leu	Ser	Trp	Glu	His	Ile
	2210					2215					2220			
Tyr	Leu	Ser	Ser	Leu	Gly	Val	Thr	Asp	Gly	Lys	Glu	Val	Val	Asp
	2225					2230					2235			
Phe	Val	Arg	Glu	Thr	Tyr	Leu	Ser	Asp	Val	Glu	Leu	Ser	Glu	Leu
	2240					2245					2250			



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Asp Ser Phe Met Gly Gly Asp Leu Tyr Leu Pro Gly Gly Trp Pro  
 2255 2260 2265  
 Lys Pro Phe Asn Leu Arg Asp Leu Thr Trp Tyr Ser Arg Glu Thr  
 2270 2275 2280  
 Thr Val Arg Gln Asn Cys Met Tyr Leu Glu Phe Leu Gly Ala Gln  
 2285 2290 2295  
 Tyr Ala Ser His Gln Pro Lys Ile Ser Asp Asn Val Lys Ser Arg  
 2300 2305 2310  
 Asp Arg Glu Leu Ala Ala Gly Glu Pro Arg Ile Ile Tyr Ser Ile  
 2315 2320 2325  
 Asp Ser Trp Thr Leu Lys Lys Val Leu Phe Pro Lys Ala Leu Ile  
 2330 2335 2340  
 Gly Ser Ser Cys Ala Pro Asp Ala Ala Asn Phe Glu Asn Asp Leu  
 2345 2350 2355  
 Ala Ser Lys Met Leu Leu Phe Ala Ala Asn Trp Thr Ile Glu Gln  
 2360 2365 2370  
 Ala Thr Glu Glu Asp Ile Gln Leu Tyr Leu Ala Trp Phe Ser Trp  
 2375 2380 2385  
 Phe Gly Ser Arg Leu Gln Gln His Cys Pro Phe Leu Leu Cys Phe  
 2390 2395 2400  
 Leu Asn Thr Leu Lys Val Glu Phe Glu His Pro Ile Trp Asn His  
 2405 2410 2415  
 Ile Ser Arg Cys Arg Lys Asn Leu Lys Phe Leu Cys Arg Leu Asp  
 2420 2425 2430  
 Pro Asp Ala Val Pro Ile Pro Met Leu Ser Ser Lys Leu Ile Asp  
 2435 2440 2445  
 Val Ala Ala Ser Asn Asp Gln Ser Lys Pro Tyr Ser Lys Ser Leu  
 2450 2455 2460  
 Phe Glu Ser Leu Asn Ser Val Gly Val Leu Arg Arg Ser Tyr Gln  
 2465 2470 2475  
 Gln Trp Leu Val Glu Ser Asn Asp Asn His Thr Asp Val Ser Thr  
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Phe	Thr	Arg	Phe	Leu	Asp	Ser	Leu	Arg	Val	Leu	Glu	Lys	Lys	Ile
	2495					2500					2505			
Leu	Cys	Glu	Ile	Val	Gly	Ala	Pro	Ser	Phe	Ser	Val	Leu	Ile	Gln
	2510					2515					2520			
Leu	Tyr	Thr	Glu	Val	Ile	Asp	Asn	His	Ser	Phe	Phe	Trp	Ser	Gly
	2525					2530					2535			
Leu	Val	Ser	Ser	Ser	Asp	Glu	Tyr	Leu	Leu	Phe	Ser	Phe	Trp	Ser
	2540					2545					2550			
Leu	Ile	Lys	Ser	Ile	Lys	Lys	Met	His	Ser	Phe	Phe	Pro	Gly	Glu
	2555					2560					2565			
Val	Gln	Val	Val	Leu	Glu	Glu	Ser	Lys	Asn	Ile	Asn	Asn	Ile	Val
	2570					2575					2580			
Leu	His	Gly	His	Pro	Glu	Lys	Ser	Met	Leu	Trp	Ala	Tyr	Gly	Gly
	2585					2590					2595			
His	Pro	Ser	Leu	Pro	Val	Ser	Ala	Glu	Leu	Phe	His	Lys	Gln	Gln
	2600					2605					2610			
Glu	Phe	Leu	Gln	Leu	Cys	Ser	Thr	Val	Trp	Pro	Leu	Lys	Ser	Glu
	2615					2620					2625			
Ser	Asp	Glu	His	Gly	Asn	Asp	His	Leu	Thr	Lys	Ala	Ile	Pro	Phe
	2630					2635					2640			
Ser	Gly	Pro	Glu	Leu	Cys	Leu	Leu	Ala	Leu	Glu	Gly	Leu	Cys	Ile
	2645					2650					2655			
Ser	Ser	Tyr	Ile	Ala	Asp	Glu	Asp	Asp	Val	Asp	Tyr	Val	Ala	Ala
	2660					2665					2670			
Val	Gln	Leu	Asp	Glu	Ile	Tyr	Gln	Thr	Phe	Leu	Glu	Arg	Leu	Lys
	2675					2680					2685			
Leu	Glu	Lys	Lys	Arg	Leu	Glu	Asp	Lys	Met	Gly	Phe	Ser	Glu	Ile
	2690					2695					2700			
Asp	Asn	Thr	Glu	Asn	Ile	Thr	Ala	Ser	Cys	Cys	Val	Phe	Cys	Pro
	2705					2710					2715			

Glu Ile Val Thr Thr Gly Ser Gly Phe Ser Ser Trp Val Lys Thr  
 2720 2725 2730  
 Cys Phe Ile Ala Ser Ser Glu Ser Cys Ser Leu Asp Val Glu Leu  
 2735 2740 2745  
 Leu Ala Ala Leu Gln His Leu Leu Val Ala Arg Pro Thr Glu His  
 2750 2755 2760  
 Gln Asp Leu Val Asp Ile Arg Lys Leu Leu Lys Pro Ala Leu Glu  
 2765 2770 2775  
 Tyr Ser Leu Ser Ser Thr Arg Pro Pro Gln Thr Leu Val Ala His  
 2780 2785 2790  
 Gln Lys Leu Leu Trp Ala Ile Asp Ala His Ala Ser Glu Leu Gly  
 2795 2800 2805  
 Val Asp Thr Lys Ile Ala Gly Phe Ala Leu Glu Ile Trp Tyr Trp  
 2810 2815 2820  
 Trp His Ser Val Leu Trp Lys Asn Ser Gln Ile Gly Leu Met Ile  
 2825 2830 2835  
 Ala His Leu Val Thr Ser Phe Phe His Leu Met Phe Thr Gly Pro  
 2840 2845 2850  
 Thr Glu Tyr Leu Arg His Trp Gln Leu Ser Asp Ser Val Thr Phe  
 2855 2860 2865  
 Tyr Ala Asp Ser Ala Cys Glu Asn Ser Tyr Arg Cys Ser Asp Ser  
 2870 2875 2880  
 Ile Ile Tyr Thr His Gln Lys Ser Phe Glu Ser Glu Thr Phe Val  
 2885 2890 2895  
 Ala Ile Lys Ser Val Phe His Ala Ile Glu Lys Lys Gln Asn Lys  
 2900 2905 2910  
 Met Asp Gly Ile Gln Asn Leu Ile Ser Leu Ile Gly Ser Ser Ser  
 2915 2920 2925  
 His Asn Lys Leu Lys Ser Val Thr His Ser Phe Val Gly Pro Leu  
 2930 2935 2940  
 Ala Lys Arg Leu Tyr Ser Asp Ser Ser Ser Asn Glu Phe Tyr Cys  
 2945 2950 2955

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Asn Leu Gly Leu Ala Trp Leu Tyr Leu Gly Gly Leu Arg Phe His  
 2960 2965 2970  
 Leu Leu Asn Ser Leu Asp Val Ile Asp Pro Ala Met Lys Ile Thr  
 2975 2980 2985  
 Cys Lys Leu Leu Lys Leu Glu Glu Lys Ile Ser Ser Leu Glu Leu  
 2990 2995 3000  
 Asn Ile Lys Val Arg Gly Glu Cys Gly Tyr Leu Ser Gly Leu Leu  
 3005 3010 3015  
 Tyr Ser Gly Asn Asn Asp Glu Ser Ser Glu His Thr Leu Ser Lys  
 3020 3025 3030  
 Leu Lys Thr Glu His Lys Arg Leu Gln Arg Lys Val Ile Phe Arg  
 3035 3040 3045  
 Ser Asp Pro Lys Lys Tyr Gln Asp Leu Arg Arg Ala Leu Asp Glu  
 3050 3055 3060  
 Phe Ala Gly Phe Leu Thr Arg Pro Ile Ser Leu Val Asn Asp Ile  
 3065 3070 3075  
 Glu Val Leu Asp Trp Asn Gln Val Val Glu Gln Val Phe Asn Trp  
 3080 3085 3090  
 Gln Glu Thr Ala Ile Ser Phe Ile Asp Arg Met Ser Ser Asp Tyr  
 3095 3100 3105  
 Ser Glu Tyr Val Asp Ile Thr Gln Pro Ile Gln Val Ser Val Tyr  
 3110 3115 3120  
 Glu Met Lys Leu Gly Leu Ser Leu Phe Val Ser Gly Ala Leu Leu  
 3125 3130 3135  
 Gly Lys Leu Leu Asn Arg Phe Asp Ile Asp Met Val Asp Ser Val  
 3140 3145 3150  
 Met Glu Thr Ile Tyr Ala Leu Met Arg Phe Pro Arg Asp Ser Ser  
 3155 3160 3165  
 Ile Ala Ser Thr Thr Tyr Thr Glu Cys Leu Pro Pro Leu His Leu  
 3170 3175 3180  
 Ser His Gly Ala Asn Ser Arg Ala Lys Ser Leu Gly Leu Asp Val  
 3185 3190 3195

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Gly Leu Leu His Lys Leu Ile Ser Val Ser Ser Ala Glu Asp Ser  
 3200 3205 3210  
 Arg Lys Ala Ser Glu Leu Gln Leu Lys Val Ala Leu Tyr Lys Asn  
 3215 3220 3225  
 Leu His Ala Arg Val Leu Gln Phe Val Ala Asn Thr Gly Leu Leu  
 3230 3235 3240  
 Asp Glu Ala Ser Phe Glu Leu Leu Asp Lys Ile Tyr Val Glu Leu  
 3245 3250 3255  
 Ala Arg Ile Trp Met Glu Met Lys Phe Gln Ala Lys Thr Lys Ala  
 3260 3265 3270  
 Asp Asn Leu Pro Gly Leu Tyr Lys Phe Arg Ser Arg Asp Phe Lys  
 3275 3280 3285  
 Ile Asp Ser Val Met Glu Val Asp Ile Ser Ala Leu Gly Lys Tyr  
 3290 3295 3300  
 Phe Pro Asn Glu Ser Phe Ser Glu Trp Gln Glu Tyr Leu Ala Asp  
 3305 3310 3315  
 Asp Asp Thr Lys Asn Val Lys Asp Met Thr His Ile Asp Gln Asp  
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 3380 3385 3390  
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3425

3430

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4370

4375

4380

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Glu	Ser	Gly	Cys	Gly	Asp	Phe	Ala	Ile	Arg	Ala	Leu	Ala	Thr	Val
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Thr	Phe	Lys	Gln	Glu	Asn	Leu	Ile	Glu	Asp	Gln	Pro	Val	Val	Asn
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5075						5080					5085			

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Leu Leu Asp Asp Ala Glu Gln Ser Val Phe Asp Leu Ala Asp Tyr  
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 Asp Ser Phe Pro Phe Pro Tyr Tyr Ile Val Leu Arg Asp Ile Glu  
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Phe Thr Leu Val Val Phe Ser Ala Pro Pro Ile Cys Arg Ser Ser Ser  
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Ser Asp Ser Thr Leu Leu His Val Lys Asp Lys Glu Asn Pro Phe Pro  
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Phe Leu Cys Ser Glu Asn Asn Pro Ser Phe Ser Leu His Thr Pro Ala  
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35 40 45

Leu Leu Ile Ser Cys Leu Asn His Arg Glu Pro Ala Leu Thr Phe Arg  
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Cys Ser Cys Leu Ser Ser Pro Ile Glu Ser Gly Ser Gln Ile Glu Ser  
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Thr Arg Thr Ser Ser Asp Asn Met Gln Arg Val Ile Gly Leu Tyr Leu  
385 390 395 400

Ser Tyr Gly Leu Ser Phe Glu Asp Ile Leu Ala Met Ser Thr Lys His  
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Tyr Leu Ile Glu Tyr Met Gly Arg Glu Val Glu Glu Leu Leu Ala Phe  
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Pro Ala Phe Leu Gly Tyr Lys Leu Asp Ser Arg Ile Lys His Arg Tyr  
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Glu Glu Lys Leu Lys Ser Arg Gly Glu Asn Met Ser Leu Asn Lys Leu  
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cgtgccattt	atttgttagg	ttcaggggac	cttctgcagc	attttttgac	tgtcatattt	2040

047-E2F-PCT.ST25.txt

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<210> 1046

<211> 976

<212> PR1

<213> Arabidopsis thaliana

<400> 1046

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 35 40 45

Leu Gln Ala Leu Gln Gly Phe Ser Ser Pro Phe Ile Phe Trp Asp Arg  
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Lys Glu Gln Thr Phe Arg Ala Lys Ser Glu Ile Arg Val Ser His Leu  
 65 70 75 80

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Ser Gln Ser Ser Leu His Val Leu Leu Ala Gly Phe Leu Tyr Ala Ala  
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Thr Cys Leu Lys Leu Val Glu Ser Ile Val Ser Gly Ile Asn Ala Ser  
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Leu Lys Ser Pro Pro Thr Leu Met Ala Phe Ser Asn Ser Ala Ser Gly  
115 120 125

Trp Leu Glu Ala Asn Ile Ala Leu Asn Glu Glu Val Lys Ile Asn Asp  
130 135 140

Ser Asn Val Ala Val Thr Pro Thr Leu Leu Gly Leu Thr Ser Ser Leu  
145 150 155 160

Ser Ser Leu Cys Ser Asp Ala Glu Tyr Leu Phe Gln Val Val Arg Gly  
165 170 175

Ala Ile Pro His Ala Tyr Phe Glu Ser Ser Ser Ala Ile Ser Thr Ala  
180 185 190

Glu Ile Ala Val His Val Leu Asp Tyr Leu Tyr Lys Arg Leu Asp Glu  
195 200 205

Val Cys Leu Val Gln Gly Gly Glu Leu Val Ala Val Glu Gly Phe His  
210 215 220

Met Leu Leu Gln Ile Phe Ala Gly Ser Leu Leu Pro Tyr Val Glu Ser  
225 230 235 240

Leu Asp Ser Trp Leu Phe Glu Gly Thr Leu Asp Asp Pro Phe Glu Glu  
245 250 255

Leu Phe Phe Thr Ala Asn Gln Ser Val Ser Val Ser Asp Ala Glu Phe  
260 265 270

Trp Glu Lys Ser Tyr Leu Leu Thr Arg Val Leu Gly Pro Lys Ser Asn  
275 280 285

Val Thr Ser Leu Asn Gln Lys Lys Gly Met Ser Gly Asn Asp Ser Asn  
290 295 300

Ser Val Ser Asp Lys Asp Lys Glu Gln Asn Asn Arg Val Leu Cys Pro  
305 310 315 320

Leu Phe Ile Lys Asp Ile Cys Lys Ser Ile Val Ser Ala Gly Lys Ser  
325 330 335

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Leu Gln Leu Met Gln His Ile Pro Ser Thr Ser Ser Glu Asn Cys Glu  
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 355 360 365  
 Ile Leu Leu Ala Gly Lys Asn Ser Phe Arg Ser Ile Ala Asp Leu Ser  
 370 375 380  
 Leu Ser Glu Ile Phe Cys Leu Ser Leu Ala Gly Leu Ile Gly His Gly  
 385 390 395 400  
 Asp His Val Ser Arg Tyr Leu Trp Lys Asp Glu Thr Asp Glu Trp Glu  
 405 410 415  
 Ile Ser Pro Thr Leu Ala Ser Tyr Ile Ser Gly Lys Leu Val Asn Gly  
 420 425 430  
 Thr Gly Asp Leu Leu Thr Tyr Ser Glu Arg Met Trp Tyr Lys Leu Leu  
 435 440 445  
 Val Gly Ala Val Gln Glu Lys Lys Ser Ile Glu Ala Lys Ser Glu Leu  
 450 455 460  
 Gln Ser Pro Cys Cys Val Thr Cys Val Lys Glu Glu Lys Asn Val Leu  
 465 470 475 480  
 Ala Ala Glu Lys Val Leu Gln Gly Leu Phe Cys His Glu Asn Leu Val  
 485 490 495  
 Val Ser Ala Ser Lys Met Asp Leu Glu Arg Asn Lys Asn Ala Trp His  
 500 505 510  
 Val Leu Asn Leu Ser Glu Asn Tyr Cys Leu Pro Ser Leu Asn Asp Lys  
 515 520 525  
 Ser Leu Leu Ser Ala Val Phe Glu Gly Ser Gly Val Ala Pro Lys Phe  
 530 535 540  
 Val Gly Thr Asn Tyr Lys Tyr Gly Phe Gln Phe Gly Arg Ser Glu Tyr  
 545 550 555 560  
 Leu Ser Ser Gln Asp Asp Thr Lys Ile Leu Glu Thr Leu Phe Pro Phe  
 565 570 575  
 Pro Thr Leu Leu Pro Ser Phe Gln Ser Lys Leu His Met Ser Glu Phe

Leu Pro Tyr Gln Lys Asn Ser Thr Leu Pro Ser Arg Val Leu Ser Trp  
595 600

Ile Leu Arg Thr Glu Pro Arg Asn Thr Leu Leu Pro Val Val Ile Met  
610 615

Gln Glu Cys Phe Thr Ile Asn Ile Arg Arg Gln Val Asp Asn Ile Ser  
625 630 635

Lys Val Ile Phe Ser Lys Leu Met Asn Glu Trp Lys Leu Met His Glu  
645 650 655

Leu Ala Val Leu Arg Ala Ile Tyr Leu Leu Gly Ser Gly Asp Leu Leu  
660 665 670

Gln His Phe Leu Thr Val Ile Phe Asp Arg Leu Gly Lys Gly Glu Ser  
675 680 685

Ser Asn Asp Asp Phe Glu Leu Asn Ile Ile Ile Gln Glu Ser Ile Arg  
690 695 700

Asn Ser Ala Asp Thr Met Leu Leu Ser Ser Pro Asp Ala Leu Val Val  
705 710 715 720

Ser Ile Ser Ser Glu Gly Cys Leu Asp Arg Asp Lys Asp Asp Lys Gly  
725 730 735

Asp Val Lys Ser Leu Ser Ser Pro Arg Glu Ser Ser Val Asn Asn Tyr  
740 745 750

Ala Ile Asp Cys Leu Glu Ser Leu Lys Phe Thr Tyr Lys Val Pro Trp  
755 760 765

Pro Leu Glu Leu Ile Ala Asn Ser Glu Ala Ile Lys Lys Tyr Asn Gln  
770 775 780

Val Lys Arg Ala Lys Tyr Val Leu Asp Lys Ala Arg Arg Leu Met Trp  
785 790 795 800

Lys Gly Lys Gly Ser Ala Thr Lys Ile Arg Lys His His Cys Leu Leu  
805 810 815

Glu Gln Lys Leu Leu Asn Phe Val Asp Ala Phe His Gln Tyr Val Met  
820 825 830

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Asp Arg Val Tyr His Thr Ala Trp Arg Glu Leu Cys Glu Ala Met Val  
835 840 845

Lys Ala Gly Ser Leu Asp Glu Val Ile Asp Val His Glu Thr Tyr Leu  
850 855 860

Leu Ser Ile Gln Arg Gln Cys Phe Val Val Gln Glu Lys Leu Trp Ala  
865 870 875 880

Ile Ile Ala Ser Arg Ile Asn Met Ile Leu Gly Leu Ala Leu Glu Phe  
885 890 895

Tyr Ser Ile Gln Gln Thr Leu Ser Ser Gly Gly Ala Val Ser Ala Ile  
900 905 910

Lys Ala Arg Trp Glu Met Glu Ile Asp Arg Ile Glu Lys Gln Phe Glu  
915 920 925

Asp Cys Ile Ala Phe Leu Leu Arg Val Leu Thr Ser Lys Lys Asn Val  
930 935 940

Gly His Phe Pro His Leu Ala Asp Leu Val Thr Arg Ile Asn Tyr Asn  
945 950 955 960

Tyr His Tyr Met Ser Asp Thr Gly Ser Ser Met Thr Ala Ser Gly Ser  
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<210> 1047

<211> 1572

<212> DNA

<213> Arabidopsis thaliana

<400> 1047

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accggctcca tccctgcgg caagcgtagc gattttggct actccaaaga ctccacgcat	180
cactacacca tcggcaagtt gctcgccat ggtcaattcg gctacaccta cgtcgccatc	240
cacagaccca atggagatcg cgtcgccgta aaaagactcg ataagtctaa gatggttctt	300
cctattgctg ttgaggatgt caagcgtagc gttcagattc ttattgctct ctctggccac	360
gagaatgttg ttcagtttca caatgccttt gaggatgacg attacgtcta tattgttatg	420
gagttgtgcg aaggaggcga attgctggat aggatattat ccaagaaagg taatcggtac	480

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ctagattcgc ctctaaaggc tacggatttt ggtttatcgg attttatcaa accagggaaa 660
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aggcgccctt tttgggtag aactgaagat ggtatattta aagaggtttt aagaaataaa 840
cctgacttca gccgtaaac tttgggcaact ataagtgaca gcgcaaaga ttttgtgaaa 900
aagttacttg taaaagacc acgagcacgg ctaactgctg cacaagcact atcacatgcg 960
tgggttagag aaggcgggaa tgctactgat atccctgtcg acatttcagt tctgaacaac 1020
ttaagacaat ttgtgagata cagccgtcta aagcaatttg ctttaagggc gcttgctagc 1080
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ccactgctgg atgaagcaga catagacaga gatgggaaaa taagcctgca tgagttcagg 1500
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aatcttcgat ag 1572

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&lt;210&gt; 1048

&lt;211&gt; 523

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1048

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Met Gly Val Cys Phe Ser Ala Ile Arg Val Thr Gly Ala Ser Ser Ser
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Arg Arg Ser Ser Gln Thr Lys Ser Lys Ala Ala Pro Thr Pro Ile Asp
20          25          30

```

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Thr Lys Ala Ser Thr Lys Arg Arg Thr Gly Ser Ile Pro Cys Gly Lys
35          40          45

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Arg Thr Asp Phe Gly Tyr Ser Lys Asp Phe His Asp His Tyr Thr Ile  
 50 55 60  
 Gly Lys Leu Leu Gly His Gly Gln Phe Gly Tyr Thr Tyr Val Ala Ile  
 65 70 75 80  
 His Arg Pro Asn Gly Asp Arg Val Ala Val Lys Arg Leu Asp Lys Ser  
 85 90 95  
 Lys Met Val Leu Pro Ile Ala Val Glu Asp Val Lys Arg Glu Val Gln  
 100 105 110  
 Ile Leu Ile Ala Leu Ser Gly His Glu Asn Val Val Gln Phe His Asn  
 115 120 125  
 Ala Phe Glu Asp Asp Asp Tyr Val Tyr Ile Val Met Glu Leu Cys Glu  
 130 135 140  
 Gly Gly Glu Leu Leu Asp Arg Ile Leu Ser Lys Lys Gly Asn Arg Tyr  
 145 150 155 160  
 Ser Glu Lys Asp Ala Ala Val Val Val Arg Gln Met Leu Lys Val Ala  
 165 170 175  
 Gly Glu Cys His Leu His Gly Leu Val His Arg Asp Met Lys Pro Glu  
 180 185 190  
 Asn Phe Leu Phe Lys Ser Ala Gln Leu Asp Ser Pro Leu Lys Ala Thr  
 195 200 205  
 Asp Phe Gly Leu Ser Asp Phe Ile Lys Pro Gly Lys Arg Phe His Asp  
 210 215 220  
 Ile Val Gly Ser Ala Tyr Tyr Val Ala Pro Glu Val Leu Lys Arg Arg  
 225 230 235 240  
 Ser Gly Pro Glu Ser Asp Val Trp Ser Ile Gly Val Ile Thr Tyr Ile  
 245 250 255  
 Leu Leu Cys Gly Arg Arg Pro Phe Trp Asp Arg Thr Glu Asp Gly Ile  
 260 265 270  
 Phe Lys Glu Val Leu Arg Asn Lys Pro Asp Phe Ser Arg Lys Pro Trp  
 275 280 285  
 Ala Thr Ile Ser Asp Ser Ala Lys Asp Phe Val Lys Lys Leu Leu Val  
 290 295 300

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Lys Asp Pro Arg Ala Arg Leu Thr Ala Ala Gln Ala Leu Ser His Ala  
305 310 315 320

Trp Val Arg Glu Gly Gly Asn Ala Thr Asp Ile Pro Val Asp Ile Ser  
325 330 335

Val Leu Asn Asn Leu Arg Gln Phe Val Arg Tyr Ser Arg Leu Lys Gln  
340 345 350

Phe Ala Leu Arg Ala Leu Ala Ser Thr Leu Asp Glu Ala Glu Ile Ser  
355 360 365

Asp Leu Arg Asp Gln Phe Asp Ala Ile Asp Val Asp Lys Asn Gly Val  
370 375 380

Ile Ser Leu Glu Glu Met Arg Gln Ala Leu Ala Lys Asp Leu Pro Trp  
385 390 395 400

Lys Leu Lys Asp Ser Arg Val Ala Glu Ile Leu Glu Ala Ile Asp Ser  
405 410 415

Asn Thr Asp Gly Leu Val Asp Phe Thr Glu Phe Val Ala Ala Ala Leu  
420 425 430

His Val His Gln Leu Glu Glu His Asp Ser Glu Lys Trp Gln Leu Arg  
435 440 445

Ser Arg Ala Ala Phe Glu Lys Phe Asp Leu Asp Lys Asp Gly Tyr Ile  
450 455 460

Thr Pro Glu Glu Leu Arg Met His Thr Gly Leu Arg Gly Ser Ile Asp  
465 470 475 480

Pro Leu Leu Asp Glu Ala Asp Ile Asp Arg Asp Gly Lys Ile Ser Leu  
485 490 495

His Glu Phe Arg Arg Leu Leu Arg Thr Ala Ser Ile Ser Ser Gln Arg  
500 505 510

Ala Pro Ser Pro Ala Gly His Arg Asn Leu Arg  
515 520

<210> 1049

<211> 1020

<212> DNA

<213> *Arabidopsis thaliana*

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aagtttattg tggaggctgc aagcaaggga tcggagctgg ttgtgttccc ggaggcgttt    180
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gggctgatg agttccgcaa gtaccatgct tctgctatta aagttcctgg ccctgaagta    300
gaaaagttag cggagttggc cggaagaac aatgtgtact tggtaatggg agcgatagag    360
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gagaatagga tgcccctcta cagaactgct ttgtacgcca aaggcattga gctttattgt    600
gcacctactg ctgatggttc gaaagaatgg caatcgctga tgcttcacat tgcgatcgaa    660
ggtggatggt tcgtattgtc ggcttgccag ttctgccttc gtaaagattt ccctgatcat    720
cctgactact tgtttaccga ttggtacgac gacaaagagc ctgactctat tgtttcccaa    780
ggtggaagtg ttattatttc accttggga caggttcttg cgggacaaaa ctttgaatca    840
gagggctcca tcacagctga tcttgatctt ggtgatgtag caagagctaa gttgtacttc    900
gattcggttg gacattactc gagaccagat gttttacact tgaccgtaaa tgagcacccg    960
aagaaaccgg tcacattcat ttcgaagggtg gagaaagcgg aagatgactc aaacaagtaa    1020

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&lt;210&gt; 1050

&lt;211&gt; 339

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1050

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Met Ser Thr Ser 5 Glu Asn Thr Pro Phe Asn Gly Val Ala Ser Ser Thr
1          5          10          15

Ile Val Arg Ala Thr Ile Val Gln Ala Ser Thr Val Tyr Asn Asp Thr
20          25          30

Pro Ala Thr Leu Glu Lys Ala Asn Lys Phe Ile Val Glu Ala Ala Ser
35          40          45

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047-E2F-PCT.ST25.txt

Lys Gly Ser Glu Leu Val Val Phe Pro Glu Ala Phe Ile Gly Gly Tyr  
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 Pro Arg Gly Phe Arg Phe Gly Leu Gly Val Gly Val His Asn Glu Glu  
 65 70 75 80  
 Gly Arg Asp Glu Phe Arg Lys Tyr His Ala Ser Ala Ile Lys Val Pro  
 85 90 95  
 Gly Pro Glu Val Glu Lys Leu Ala Glu Leu Ala Gly Lys Asn Asn Val  
 100 105 110  
 Tyr Leu Val Met Gly Ala Ile Glu Lys Asp Gly Tyr Thr Leu Tyr Cys  
 115 120 125  
 Thr Ala Leu Phe Phe Ser Pro Gln Gly Gln Phe Leu Gly Lys His Arg  
 130 135 140  
 Lys Leu Met Pro Thr Ser Leu Glu Arg Cys Ile Trp Gly Gln Gly Asp  
 145 150 155 160  
 Gly Ser Thr Ile Pro Val Tyr Asp Thr Pro Ile Gly Lys Leu Gly Ala  
 165 170 175  
 Ala Ile Cys Trp Glu Asn Arg Met Pro Leu Tyr Arg Thr Ala Leu Tyr  
 180 185 190  
 Ala Lys Gly Ile Glu Leu Tyr Cys Ala Pro Thr Ala Asp Gly Ser Lys  
 195 200 205  
 Glu Trp Gln Ser Ser Met Leu His Ile Ala Ile Glu Gly Gly Cys Phe  
 210 215 220  
 Val Leu Ser Ala Cys Gln Phe Cys Leu Arg Lys Asp Phe Pro Asp His  
 225 230 235 240  
 Pro Asp Tyr Leu Phe Thr Asp Trp Tyr Asp Asp Lys Glu Pro Asp Ser  
 245 250 255  
 Ile Val Ser Gln Gly Gly Ser Val Ile Ile Ser Pro Leu Gly Gln Val  
 260 265 270  
 Leu Ala Gly Pro Asn Phe Glu Ser Glu Gly Leu Ile Thr Ala Asp Leu  
 275 280 285  
 Asp Leu Gly Asp Val Ala Arg Ala Lys Leu Tyr Phe Asp Ser Val Gly  
 290 295 300

His Tyr Ser Arg Pro Asp Val Leu His Leu Thr Val Asn Glu His Pro  
 305 310 315 320

Lys Lys Pro Val Thr Phe Ile Ser Lys Val Glu Lys Ala Glu Asp Asp  
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Ser Asn Lys

<210> 1051

<211> 2394

<212> DNA

<213> Arabidopsis thaliana

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 tctaccagc ttggaactga ggaatattg aactcatga agacaatcag tgtgactgaa 1020  
 tatttaaaact atgaagacgg aaagtctcc aagagtaaag gtgttgaggt gtttggaat 1080  
 gatgtaaaag atacaatat acctgtcgaa gtgtggagat actacttgc gaccaacagg 1140

047-E2F-PCT.ST25.txt

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<210> 1052

<211> 797

<212> PRT

<213> Arabidopsis thaliana

<400> 1052

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20 25 30

His Leu Gly Asn Ile Ile Gly Cys Val Leu Ser Ala Asp Val Tyr Ala  
 35 40 45  
 Arg Tyr Cys Arg Leu Arg Gly Tyr Asn Ala Ile Tyr Ile Cys Gly Thr  
 50 55 60  
 Asp Glu Tyr Gly Thr Ala Thr Glu Thr Lys Ala Leu Glu Glu Asn Cys  
 65 70 75 80  
 Thr Pro Lys Glu Ile Cys Asp Lys Tyr His Ala Ile His Lys Glu Val  
 85 90 95  
 Tyr Asp Trp Phe Gly Ile Ser Phe Asp Lys Phe Gly Arg Thr Ser Thr  
 100 105 110  
 Pro Glu Gln Thr Glu Val Cys Gln Ala Ile Phe Asn Lys Leu Trp Asp  
 115 120 125  
 Asn Lys Trp Leu Ser Glu Asn Thr Met Gln Gln Leu Tyr Cys Asp Thr  
 130 135 140  
 Cys Lys Lys Phe Leu Ala Asp Arg Leu Val Glu Gly Ser Cys Pro Phe  
 145 150 155 160  
 Glu Gly Cys Asn Tyr Asp Ser Ala Arg Gly Asp Gln Cys Glu Lys Cys  
 165 170 175  
 Gly Lys Leu Leu Asn Pro Thr Glu Leu Lys Asp Pro Lys Cys Lys Val  
 180 185 190  
 Cys Gln Asn Thr Pro Arg Ile Arg Asp Thr Asp His Leu Phe Ile Glu  
 195 200 205  
 Leu Pro Leu Leu Lys Asp Arg Leu Glu Ala Tyr Ile Lys Lys Thr Ser  
 210 215 220  
 Val Thr Gly Ser Trp Ser Gln Asn Ala Ile Gln Thr Thr Asn Ala Trp  
 225 230 235 240  
 Leu Arg Asp Gly Leu Arg Gln Arg Cys Ile Thr Arg Asp Leu Lys Trp  
 245 250 255  
 Gly Val Pro Val Pro His Glu Lys Tyr Lys Asp Lys Val Phe Tyr Val  
 260 265 270  
 Trp Phe Asp Ala Pro Ile Gly Tyr Val Ser Ile Thr Ser Cys Tyr Thr  
 275 280 285

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Ser Glu Trp Glu Lys Trp Trp Lys Asn Pro Glu Asn Val Glu Leu Tyr  
290 295 300

Gln Phe Met Gly Lys Asp Asn Val Pro Phe His Thr Val Met Phe Pro  
305 310 315 320

Ser Thr Gln Leu Gly Thr Glu Glu Asn Trp Thr Leu Met Lys Thr Ile  
325 330 335

Ser Val Thr Glu Tyr Leu Asn Tyr Glu Asp Gly Lys Phe Ser Lys Ser  
340 345 350

Lys Gly Val Gly Val Phe Gly Asn Asp Val Lys Asp Thr Asn Ile Pro  
355 360 365

Val Glu Val Trp Arg Tyr Tyr Leu Leu Thr Asn Arg Pro Glu Val Ser  
370 375 380

Asp Thr Ser Phe Ser Trp Thr Asp Leu Gln Ala Lys Leu Asn Gly Glu  
385 390 395 400

Leu Leu Ser Asn Leu Gly Asn Phe Val Asn Arg Val Leu Ser Phe Ile  
405 410 415

Ala Lys Pro Asp Asn Ala Gly Tyr Gly Ser Val Ile Pro Asp Ala His  
420 425 430

Asp Ala Glu Ser His Ser Leu Thr Lys Ser Leu Ala Glu Lys Val Glu  
435 440 445

Lys Phe Val Ala Glu Tyr Val Glu Ala Met Glu Lys Val Lys Leu Lys  
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Gln Gly Leu Lys Thr Ala Met Leu Ile Ser Ser Glu Gly Asn Tyr Tyr  
465 470 475 480

Leu Gln Ala Ser Gln Phe Trp Lys Leu Tyr Lys Glu Asp Lys Pro Leu  
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Cys Ala Val Val Ile Arg Thr Ala Ala Gly Leu Val His Leu Leu Ala  
500 505 510

Gln Leu Leu Glu Pro Phe Met Pro Ser Phe Ser Cys Glu Val Phe Lys  
515 520 525

Gln Leu Asn Leu Pro Pro Gln Phe Ser Leu Ser Asp Glu Arg Gly Glu  
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Val Leu Leu Ala Ser Arg Pro Trp Asp Ile Leu Pro Pro Ser His Arg  
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Ile Gly Thr Pro Gln Pro Leu Phe Lys Glu Leu Glu Asn Asp Glu Val  
565 570 575

Ala Arg Tyr Arg Glu Lys Phe Ala Gly Ser Gln Ser Asp Arg Arg Ala  
580 585 590

Arg Asp Glu Ala Ala Asn Leu Ala Asp Gln Leu Asn Lys Thr Lys Leu  
595 600 605

Ser Asp Ala Lys Lys Gln Lys Ala Ser Ser Lys Gly Gly Gly Lys Pro  
610 615 620

Lys Pro Gln Pro Ala Ala Asp Arg Glu Ile Thr Met Ala Arg Leu Asp  
625 630 635 640

Ile Arg Val Gly Lys Ile Val Lys Ala Glu Lys His Pro Lys Ala Asp  
645 650 655

Ala Leu Tyr Val Glu Glu Ile Asp Val Gly Gly Gly Glu Ile Arg Thr  
660 665 670

Val Val Ser Gly Leu Val Lys Tyr Ile Pro Leu Glu Glu Met Gln Asn  
675 680 685

Arg Met Val Cys Val Leu Cys Asn Leu Lys Pro Ala Lys Met Arg Asp  
690 695 700

Ile Val Ser Gln Ala Met Val Leu Ala Ala Ser Ser Ser Asp Gly Ser  
705 710 715 720

Lys Val Glu Leu Val Glu Pro Pro Lys Thr Ala Asn Ile Gly Glu Arg  
725 730 735

Val Thr Phe Pro Gly Phe Glu Gly Glu Pro Asp Asp Val Leu Asn Pro  
740 745 750

Lys Lys Lys Val Trp Glu Thr Leu Leu Val Asp Leu Asn Thr Lys Glu  
755 760 765

Asn Leu Val Ala Cys Tyr Lys Asp Val Pro Phe Thr Thr Ser Ala Gly  
770 775 780

Val Cys Lys Val Ser Ser Ile Ser Asn Gly Thr Ile Arg

785

790

<210> 1053  
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<212> DNA  
<213> *Arabidopsis thaliana*

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gaggagagtg atgctgaagc agagaatgaa gagaaaacag agttgactat tgaagaagat    660
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gcaatggagc agtatcttgc acttgtctca aaggaaatcc ctggtttgac gaaagctggg    960
catactgtag ggaagatgct agaaatggaa acctctgttg gcttgctccc gaattcagga   1020
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<210> 1054  
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<213> *Arabidopsis thaliana*

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 20 25 30  
 Asp Leu Ser Ser Asp Gln Pro Leu Lys Pro Glu Ile Gly Val Gly Val  
 35 40 45  
 Thr Glu Asp Val Arg Phe Gly Met Lys Met Asp Ala Arg Val Leu Glu  
 50 55 60  
 Ser Gln Arg Asn Phe Gln Val Val Asp Glu Asn Val Glu Leu Val Asp  
 65 70 75 80  
 Arg Phe Leu Ser Glu Glu Ala Asp Arg Val Tyr Glu Val Asp Glu Ala  
 85 90 95  
 Val Thr Gly Asn Ala Lys Ile Cys Gly Asp Arg Glu Ala Glu Ser Ser  
 100 105 110  
 Ala Ala Ala Ser Ser Glu Asn Tyr Val Ile Ala Glu Glu Val Ile Leu  
 115 120 125  
 Val Arg Gly Gln Asp Glu Gln Ser Asp Ser Ala Glu Ala Glu Ser Ile  
 130 135 140  
 Ser Ser Val Ser Pro Glu Asn Val Val Ala Glu Glu Ile Lys Ser Gln  
 145 150 155 160  
 Gly Gln Glu Glu Val Thr Glu Leu Gly Arg Ser Gly Cys Val Glu Asn  
 165 170 175  
 Glu Glu Ser Gly Asp Val Leu Val Ala Glu Ser Glu Glu Val Arg  
 180 185 190  
 Val Glu Lys Ser Ser Asn Met Val Glu Glu Ser Asp Ala Glu Ala Glu  
 195 200 205  
 Asn Glu Glu Lys Thr Glu Leu Thr Ile Glu Glu Asp Asp Asp Trp Glu  
 210 215 220  
 Gly Ile Glu Arg Ser Glu Leu Glu Lys Ala Phe Ala Ala Ala Val Asn  
 225 230 235 240  
 Leu Leu Glu Glu Ser Gly Lys Ala Glu Glu Ile Gly Ala Glu Ala Lys

Met Glu Leu Phe Gly Leu His Lys Ile Ala Thr Glu Gly Ser Cys Arg  
 260 265 270  
 Glu Ala Gln Pro Met Ala Val Met Ile Ser Ala Arg Ala Lys Trp Asn  
 275 280 285  
 Ala Trp Gln Lys Leu Gly Asn Met Ser Gln Glu Glu Ala Met Glu Gln  
 290 295 300  
 Tyr Leu Ala Leu Val Ser Lys Glu Ile Pro Gly Leu Thr Lys Ala Gly  
 305 310 315 320  
 His Thr Val Gly Lys Met Ser Glu Met Glu Thr Ser Val Gly Leu Pro  
 325 330 335  
 Pro Asn Ser Gly Ser Leu Glu Asp Pro Thr Asn Leu Val Thr Thr Gly  
 340 345 350  
 Val Asp Glu Ser Ser Lys Asn Val Ser Gly Glu Arg  
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&lt;210&gt; 1055

&lt;211&gt; 2133

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1055

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<211> 710

<212> PRT

<213> Arabidopsis thaliana

<400> 1056

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Arg Glu Ile Ser Ala Val Ser Thr Asp Gly Gly Gln Ala Leu Leu Ser  
35 40 45  
Glu Val Ala Ala Gln Val Ser Val Leu Asn Ser Ala Phe Ser Trp Gln  
50 55 60  
Glu Ser Asp Arg Ala Ala Lys Arg Ala Thr Gln Val Leu Ala Glu  
65 70 75 80  
Leu Ala Lys Asn Glu Asp Leu Val Asn Val Ile Val Asp Gly Gly Ala  
85 90 95  
Val Pro Ala Leu Met Thr His Leu Gln Ala Pro Pro Tyr Asn Asp Gly  
100 105 110  
Asp Leu Ala Glu Lys Pro Tyr Glu His Glu Val Glu Lys Gly Ser Ala  
115 120 125  
Phe Ala Leu Gly Leu Leu Ala Ile Lys Pro Glu Tyr Gln Lys Leu Ile  
130 135 140  
Val Asp Lys Gly Ala Leu Pro His Leu Val Asn Leu Leu Lys Arg Asn  
145 150 155 160  
Lys Asp Gly Ser Ser Ser Arg Ala Val Asn Ser Val Ile Arg Arg Ala  
165 170 175  
Ala Asp Ala Ile Thr Asn Leu Ala His Glu Asn Ser Ser Ile Lys Thr  
180 185 190  
Arg Val Arg Val Glu Gly Gly Ile Pro Pro Leu Val Glu Leu Leu Glu  
195 200 205  
Phe Ser Asp Ser Lys Val Gln Arg Ala Ala Ala Gly Ala Leu Arg Thr  
210 215 220  
Leu Ala Phe Lys Asn Asp Asp Asn Lys Asn Gln Ile Val Glu Cys Asn  
225 230 235 240  
Ala Leu Pro Thr Leu Ile Leu Met Leu Gly Ser Glu Asp Ala Ala Ile  
245 250 255

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His Tyr Glu Ala Val Gly Val Ile Gly Asn Leu Val His Ser Ser Pro  
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His Ile Lys Lys Glu Val Leu Thr Ala Gly Ala Leu Gln Pro Val Ile  
275 280 285

Gly Leu Leu Ser Ser Cys Cys Pro Glu Ser Gln Arg Glu Ala Ala Leu  
290 295 300

Leu Leu Gly Gln Phe Ala Ser Thr Asp Ser Asp Cys Lys Val His Ile  
305 310 315 320

Val Gln Arg Gly Ala Val Arg Pro Leu Ile Glu Met Leu Gln Ser Pro  
325 330 335

Asp Val Gln Leu Lys Glu Met Ser Ala Phe Ala Leu Gly Arg Leu Ala  
340 345 350

Gln Asp Ala His Asn Gln Ala Gly Ile Ala His Ser Gly Gly Leu Gly  
355 360 365

Pro Leu Leu Lys Leu Leu Asp Ser Arg Asn Gly Ser Leu Gln His Asn  
370 375 380

Ala Ala Phe Ala Leu Tyr Gly Leu Ala Asp Asn Glu Asp Asn Val Ser  
385 390 395 400

Asp Phe Ile Arg Val Gly Gly Ile Gln Lys Leu Gln Asp Gly Glu Phe  
405 410 415

Ile Val Gln Ala Thr Lys Asp Cys Val Ser Lys Thr Leu Lys Arg Leu  
420 425 430

Glu Glu Lys Ile His Gly Arg Val Leu Arg His Leu Leu Tyr Leu Met  
435 440 445

Arg Ile Ser Glu Lys Ser Ile Gln Arg Arg Val Ala Leu Ala Leu Ala  
450 455 460

His Leu Cys Ser Pro Glu Asp Gln Arg Thr Ile Phe Ile Asp Asp Asn  
465 470 475 480

Gly Leu Glu Leu Leu Leu Gly Leu Leu Gly Ser Leu Asn Thr Lys Gln  
485 490 495

Gln Leu Asp Gly Ala Ala Ala Leu Tyr Lys Leu Ala Asn Lys Ser Met

Ala Leu Ser Pro Val Asp Ala Ala Pro Pro Ser Pro Thr Gln Arg Val  
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Tyr Leu Gly Glu Gln Tyr Val Asn Asn Ala Thr Leu Ser Asp Val Thr  
530 535

Phe Leu Val Glu Gly Arg Thr Phe Tyr Ala His Arg Ile Cys Leu Leu  
545 550 555 560

Ala Ser Ser Asp Ala Phe Arg Ala Met Phe Asp Gly Gly Tyr Arg Glu  
565 570 575

Lys Asp Ala Arg Asp Ile Glu Ile Pro Asn Ile Lys Trp Glu Val Phe  
580 585 590

Glu Leu Met Met Arg Phe Ile Tyr Thr Gly Ser Val Asp Ile Thr Asn  
595 600 605

Glu Ile Ser Lys Asp Leu Leu Arg Ala Ala Asp Gln Tyr Leu Leu Glu  
610 615 620

Gly Leu Lys Arg Leu Cys Glu Tyr Thr Ile Ala Gln Asp Ile Thr Leu  
625 630 635 640

Glu Ser Ile Gly Asp Met Tyr Glu Leu Ser Glu Ala Phe His Ala Met  
645 650 655

Ser Leu Arg Gln Ala Cys Ile Met Phe Ile Leu Glu His Phe Asp Lys  
660 665 670

Leu Ser Ser Met Pro Trp Gln Asn Glu Leu Val Gln Arg Thr Ile Pro  
675 680 685

Glu Ile Arg Glu Tyr Phe Cys Arg Ala Leu Thr Lys Ser Thr Thr Asn  
690 695 700

Leu Gln Ser Leu Arg Leu  
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<210> 1057

<211> 780

<212> DNA

<213> Arabidopsis thaliana



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<210> 1058

<211> 259

<212> PRT

<213> Arabidopsis thaliana

<400> 1058

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Lys Ser Leu Leu Gln Ser Asp Asp Leu Tyr Gln Tyr Ile Leu Glu Thr  
 35 40 45

Ser Val Tyr Pro Arg Glu Pro Glu Ser Met Lys Glu Leu Arg Glu Val  
 50 55 60

Thr Ala Lys His Pro Trp Asn Ile Met Thr Thr Ser Ala Asp Glu Gly  
 65 70 75 80

Gln Phe Leu Asn Met Leu Ile Lys Leu Val Asn Ala Lys Asn Thr Met

Glu Ile Gly Val Tyr Thr Gly Tyr Ser Leu Leu Ala Thr Ala Leu Ala  
100 105 110

Leu Pro Glu Asp Gly Lys Ile Leu Ala Met Asp Val Asn Arg Glu Asn  
115 120 125

Tyr Glu Leu Gly Leu Pro Ile Ile Glu Lys Ala Gly Val Ala His Lys  
130 135 140

Ile Asp Phe Arg Glu Gly Pro Ala Leu Pro Val Leu Asp Glu Ile Val  
145 150 155 160

Ala Asp Glu Lys Asn His Gly Thr Tyr Asp Phe Ile Phe Val Asp Ala  
165 170 175

Asp Lys Asp Asn Tyr Ile Asn Tyr His Lys Arg Leu Ile Asp Leu Val  
180 185 190

Lys Ile Gly Gly Val Ile Gly Tyr Asp Asn Thr Leu Trp Asn Gly Ser  
195 200 205

Val Val Ala Pro Pro Asp Ala Pro Met Arg Lys Tyr Val Arg Tyr Tyr  
210 215 220

Arg Asp Phe Val Leu Glu Leu Asn Lys Ala Leu Ala Ala Asp Pro Arg  
225 230 235 240

Ile Glu Ile Cys Met Leu Pro Val Gly Asp Gly Ile Thr Ile Cys Arg  
245 250 255

Arg Ile Ser

<210> 1059

<211> 1248

<212> DNA

<213> Arabidopsis thaliana

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caacaaggtc agccgcctgc aggatggaat cagcagtcctg caccgtcttc tggtaacca 180

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<210> 1060

<211> 415

<212> PRT

<213> Arabidopsis thaliana

<400> 1060

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Trp Met Met Gln His Gln Gln Gln Gln Gly Gln Pro Pro Ala Gly  
35 40 45

Trp Asn Gln Gln Ser Ala Pro Ser Ser Gly Gln Pro Gln Gln Gln Gln  
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50

55

Tyr Gly Gly Gly Gly Ser Gln Asn Pro Gly Ser Ala Gly Glu Ile Arg  
65 70 75 80

Ser Leu Trp Ile Gly Asp Leu Gln Pro Trp Met Asp Glu Asn Tyr Leu  
85 90 95

Met Asn Val Phe Gly Leu Thr Gly Glu Ala Thr Ala Ala Lys Val Ile  
100 105 110

Arg Asn Lys Gln Asn Gly Tyr Ser Glu Gly Tyr Gly Phe Ile Glu Phe  
115 120 125

Val Asn His Ala Thr Ala Glu Arg Asn Leu Gln Thr Tyr Asn Gly Ala  
130 135 140

Pro Met Pro Ser Ser Glu Gln Ala Phe Arg Leu Asn Trp Ala Gln Leu  
145 150 155 160

Gly Ala Gly Glu Arg Arg Gln Ala Glu Gly Pro Glu His Thr Val Phe  
165 170 175

Val Gly Asp Leu Ala Pro Asp Val Thr Asp His Met Leu Thr Glu Thr  
180 185 190

Phe Lys Ala Val Tyr Ser Ser Val Lys Gly Ala Lys Val Val Asn Asp  
195 200 205

Arg Thr Thr Gly Arg Ser Lys Gly Tyr Gly Phe Val Arg Phe Ala Asp  
210 215 220

Glu Ser Glu Gln Ile Arg Ala Met Thr Glu Met Asn Gly Gln Tyr Cys  
225 230 235 240

Ser Ser Arg Pro Met Arg Thr Gly Pro Ala Ala Asn Lys Lys Pro Leu  
245 250 255

Thr Met Gln Pro Ala Ser Tyr Gln Asn Thr Gln Gly Asn Ser Gly Glu  
260 265 270

Ser Asp Pro Thr Asn Thr Thr Ile Phe Val Gly Ala Val Asp Gln Ser  
275 280 285

Val Thr Glu Asp Asp Leu Lys Ser Val Phe Gly Gln Phe Gly Glu Leu  
290 295 300

Val His Val Lys Ile Pro Ala Gly Lys Arg Cys Gly Phe Val Gln Tyr  
 305 310 315 320

Ala Asn Arg Ala Cys Ala Glu Gln Ala Leu Ser Val Leu Asn Gly Thr  
 325 330 335

Gln Leu Gly Gly Gln Ser Ile Arg Leu Ser Trp Gly Arg Ser Pro Ser  
 340 345 350

Asn Lys Gln Thr Gln Pro Asp Gln Ala Gln Tyr Gly Gly Gly Gly Gly  
 355 360 365

Tyr Tyr Gly Tyr Pro Pro Gln Gly Tyr Glu Ala Tyr Gly Tyr Ala Pro  
 370 375 380

Pro Pro Gln Asp Pro Asn Ala Tyr Tyr Gly Gly Tyr Ala Gly Gly Gly  
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Tyr Gly Asn Tyr Gln Gln Pro Gly Gly Tyr Gln Gln Gln Gln Gln  
 405 410 415

<210> 1061

<211> 1305

<212> DNA

<213> Arabidopsis thaliana

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aatgcaagga cgaataagtg gcacagagca cggatatgc ttaggaaagcg gcattttttt	660
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&lt;210&gt; 1062

&lt;211&gt; 434

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1062

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Arg Leu Gln Ala Pro Leu Val Asp Ser Val Ser Cys Tyr Cys Arg Val
      20      25      30

```

```

Asp Ser Gly Leu Lys Thr Val Val Glu Ala Arg Lys Phe Val Pro Gly
      35      40      45

```

```

Ser Lys Leu Cys Ile Gln Pro Asp Ile Asn Pro Asn Ala His Arg Arg
      50      55      60

```

```

Lys Asn Ser Lys Arg Glu Arg Thr Arg Ile Gln Pro Pro Leu Leu Pro
      65      70      75      80

```

```

Gly Leu Pro Asp Asp Leu Ala Val Ala Cys Leu Ile Arg Val Pro Arg
      85      90      95

```

```

Ala Glu His Arg Lys Leu Arg Leu Val Cys Lys Arg Trp Tyr Arg Leu
      100      105      110

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Ala Ser Gly Asn Phe Phe Tyr Ser Gln Arg Lys Leu Leu Gly Met Ser
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047-E2F-PCT.ST25.txt

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 165 170 175  
 Ser Gly Cys His Leu Tyr Leu Phe Gly Gly Lys Asp Pro Leu Arg Gly  
 180 185 190  
 Ser Met Arg Arg Val Ile Phe Tyr Asn Ala Arg Thr Asn Lys Trp His  
 195 200 205  
 Arg Ala Pro Asp Met Leu Arg Lys Arg His Phe Phe Gly Cys Cys Val  
 210 215 220  
 Ile Asn Asn Cys Leu Tyr Val Ala Gly Gly Glu Cys Glu Gly Ile Gln  
 225 230 235 240  
 Arg Thr Leu Arg Ser Ala Glu Val Tyr Asp Pro Asn Lys Asn Arg Trp  
 245 250 255  
 Ser Phe Ile Ala Asp Met Ser Thr Ala Met Val Pro Leu Ile Gly Val  
 260 265 270  
 Val Tyr Asp Lys Lys Trp Phe Leu Lys Gly Leu Gly Ser His Gln Leu  
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 Val Met Ser Glu Ala Tyr Asp Pro Glu Val Asn Ser Trp Ser Pro Val  
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 Ser Asp Gly Met Val Ala Gly Trp Arg Asn Pro Cys Thr Ser Leu Asn  
 305 310 315 320  
 Gly Arg Leu Tyr Gly Leu Asp Cys Arg Asp Gly Cys Lys Leu Arg Val  
 325 330 335  
 Phe Asp Glu Ser Thr Asp Ser Trp Asn Lys Phe Met Asp Ser Lys Ala  
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 His Asn Lys Leu Cys Ile Ile Arg Asn Asn Met Ser Met Ser Leu Val

370

375

Asp Val Ser Asn Pro Asp Lys Asn Asn Pro Arg Leu Trp Glu Asn Ile  
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Ala Val Lys Gly Gln Ser Lys Ser Ile Leu Ser Asn Ile Trp Ser Ser  
405 410 415

Ile Ala Gly Arg Ala Leu Lys Ser His Ile Val His Cys Gln Val Leu  
420 425 430

Gln Ala

&lt;210&gt; 1063

&lt;211&gt; 3564

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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&lt;210&gt; 1064

&lt;211&gt; 1187

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1064

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Ala Ser Ser Lys Ser Asn Pro Arg Phe Ser Pro Ser Lys Leu Ser Tyr
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```

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Ser Thr Phe Phe Ser Arg Ser Ala Ile Tyr Tyr Arg Ser Lys Pro Lys
35      40      45

```

```

Gln Ala Ser Ser Ser Ser Ser Phe Ser Thr Phe Pro Pro Cys Leu Asn
50      55      60

```

```

Arg Lys Ser Ser Leu Thr His Val Leu Lys Pro Val Ser Glu Leu Ala
65      70      75      80

```

```

Asp Thr Thr Thr Lys Pro Phe Ser Pro Glu Ile Val Gly Lys Arg Thr
85      90      95

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Asp Leu Lys Lys Ile Met Ile Leu Gly Ala Gly Pro Ile Val Ile Gly
100     105     110

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047-E2F-PCT.ST25.txt

Gln Ala Cys Glu Phe Asp Tyr Ser Gly Thr Gln Ala Cys Lys Ala Leu  
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Arg Glu Glu Gly Tyr Glu Val Ile Leu Ile Asn Ser Asn Pro Ala Thr  
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Ile Met Thr Asp Pro Glu Thr Ala Asn Arg Thr Tyr Ile Ala Pro Met  
145 150 155 160

Thr Pro Glu Leu Val Glu Gln Val Ile Glu Lys Glu Arg Pro Asp Ala  
165 170 175

Leu Leu Pro Thr Met Gly Gly Gln Thr Ala Leu Asn Leu Ala Val Ala  
180 185 190

Leu Ala Glu Ser Gly Ala Leu Glu Lys Tyr Gly Val Glu Leu Ile Gly  
195 200 205

Ala Lys Leu Gly Ala Ile Lys Lys Ala Glu Asp Arg Glu Leu Phe Lys  
210 215 220

Asp Ala Met Lys Asn Ile Gly Leu Lys Thr Pro Pro Ser Gly Ile Gly  
225 230 235 240

Thr Thr Leu Asp Glu Cys Phe Asp Ile Ala Glu Lys Ile Gly Glu Phe  
245 250 255

Pro Leu Ile Ile Arg Pro Ala Phe Thr Leu Gly Gly Thr Gly Gly Gly  
260 265 270

Ile Ala Tyr Asn Lys Glu Glu Phe Glu Ser Ile Cys Lys Ser Gly Leu  
275 280 285

Ala Ala Ser Ala Thr Ser Gln Val Leu Val Glu Lys Ser Leu Leu Gly  
290 295 300

Trp Lys Glu Tyr Glu Leu Glu Val Met Arg Asp Leu Ala Asp Asn Val  
305 310 315 320

Val Ile Ile Cys Ser Ile Glu Asn Ile Asp Pro Met Gly Val His Thr  
325 330 335

Gly Asp Ser Ile Thr Val Ala Pro Ala Gln Thr Leu Thr Asp Arg Glu  
340 345 350

Tyr Gln Arg Leu Arg Asp Tyr Ser Ile Ala Ile Ile Arg Glu Ile Gly

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 370 375  
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 Ala Leu Ala Ser Lys Ala Thr Gly Phe Pro Ile Ala Lys Met Ala Ala  
 405 410 415  
 Lys Leu Ser Val Gly Tyr Thr Leu Asp Gln Ile Pro Asn Asp Ile Thr  
 420 425 430  
 Arg Lys Thr Pro Ala Ser Phe Glu Pro Ser Ile Asp Tyr Val Val Thr  
 435 440 445  
 Lys Ile Pro Arg Phe Ala Phe Glu Lys Phe Pro Gly Ser Gln Pro Leu  
 450 455 460  
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 465 470 475 480  
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 485 490 495  
 Phe Ser Gly Trp Gly Cys Ala Lys Ile Lys Glu Leu Asp Trp Asp Trp  
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 580 585 590  
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 595 600 605

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 625 630 635 640  
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 Gly Gly Pro Asn Arg Ile Gly Gln Gly Ile Glu Phe Asp Tyr Cys Cys  
 660 665 670  
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 675 680 685  
 Leu Asn Ser Asn Pro Glu Thr Val Ser Thr Asp Tyr Asp Thr Ser Asp  
 690 695 700  
 Arg Leu Tyr Phe Glu Pro Leu Thr Ile Glu Asp Val Leu Asn Val Ile  
 705 710 715 720  
 Asp Leu Glu Lys Pro Asp Gly Ile Ile Val Gln Phe Gly Gly Gln Thr  
 725 730 735  
 Pro Leu Lys Leu Ala Leu Pro Ile Lys His Tyr Leu Asp Lys His Met  
 740 745 750  
 Pro Met Ser Leu Ser Gly Ala Gly Pro Val Arg Ile Trp Gly Thr Ser  
 755 760 765  
 Pro Asp Ser Ile Asp Ala Ala Glu Asp Arg Glu Arg Phe Asn Ala Ile  
 770 775 780  
 Leu Asp Glu Leu Lys Ile Glu Gln Pro Lys Gly Gly Ile Ala Lys Ser  
 785 790 795 800  
 Glu Ala Asp Ala Leu Ala Ile Ala Lys Glu Val Gly Tyr Pro Val Val  
 805 810 815  
 Val Arg Pro Ser Tyr Val Leu Gly Gly Arg Ala Met Glu Ile Val Tyr  
 820 825 830  
 Asp Asp Ser Arg Leu Ile Thr Tyr Leu Glu Asn Ala Val Gln Val Asp  
 835 840 845  
 Pro Glu Arg Pro Val Leu Val Asp Lys Tyr Leu Ser Asp Ala Ile Glu  
 850 855 860

047-E2F-PCT.ST25.txt

Ile Asp Val Asp Thr Leu Thr Asp Ser Tyr Gly Asn Val Val Ile Gly  
865 870 875 880

Gly Ile Met Glu His Ile Glu Gln Ala Gly Val His Ser Gly Asp Ser  
885 890 895

Ala Cys Met Leu Pro Thr Gln Thr Ile Pro Ala Ser Cys Leu Gln Thr  
900 905 910

Ile Arg Thr Trp Thr Thr Lys Leu Ala Lys Lys Leu Asn Val Cys Gly  
915 920 925

Leu Met Asn Cys Gln Tyr Ala Ile Thr Thr Ser Gly Asp Val Phe Leu  
930 935 940

Leu Glu Ala Asn Pro Arg Ala Ser Arg Thr Val Pro Phe Val Ser Lys  
945 950 955 960

Ala Ile Gly His Pro Leu Ala Lys Tyr Ala Ala Leu Val Met Ser Gly  
965 970 975

Lys Ser Leu Lys Asp Leu Asn Phe Glu Lys Glu Val Ile Pro Lys His  
980 985 990

Val Ser Val Lys Glu Ala Val Phe Pro Phe Glu Lys Phe Gln Gly Cys  
995 1000 1005

Asp Val Ile Leu Gly Pro Glu Met Arg Ser Thr Gly Glu Val Met  
1010 1015 1020

Ser Ile Ser Ser Glu Phe Ser Ser Ala Phe Ala Met Ala Gln Ile  
1025 1030 1035

Ala Ala Gly Gln Lys Leu Pro Leu Ser Gly Thr Val Phe Leu Ser  
1040 1045 1050

Leu Asn Asp Met Thr Lys Pro His Leu Glu Lys Ile Ala Val Ser  
1055 1060 1065

Phe Leu Glu Leu Gly Phe Lys Ile Val Ala Thr Ser Gly Thr Ala  
1070 1075 1080

His Phe Leu Glu Leu Lys Gly Ile Pro Val Glu Arg Val Leu Lys  
1085 1090 1095

Leu His Glu Gly Arg Pro His Ala Ala Asp Met Val Ala Asn Gly  
1100 1105 1110

Gln Ile His Leu Met Leu Ile Thr Ser Ser Gly Asp Ala Leu Asp  
1115 1120 1125

Gln Lys Asp Gly Arg Gln Leu Arg Gln Met Ala Leu Ala Tyr Lys  
1130 1135 1140

Val Pro Val Ile Thr Thr Val Ala Gly Ala Leu Ala Thr Ala Glu  
1145 1150 1155

Gly Ile Lys Ser Leu Lys Ser Ser Ala Ile Lys Met Thr Ala Leu  
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Gln Asp Phe Phe Glu Val Lys Asn Val Ser Ser Leu Leu Val  
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&lt;211&gt; 888

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1066

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145 150 155 160Ala Thr Thr Ala Ser Ser Pro Glu Ala Ala Ser Val Lys Thr Asn Arg  
165 170 175Ser Val Ser Lys Asn Val Val Phe Lys Ile Gly Glu Glu Lys Ile Ala  
180 185 190Cys Gln Arg Arg Lys Ile Ala Ser Leu Ser Ala Pro Phe His Ala Met  
195 200 205Leu Tyr Gly Asn Phe Thr Glu Ser Leu Leu Asp Glu Ile Asp Met Ser  
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210

215

Glu Asn His Val Ser Ser Ser Ala Met Arg Val Val Arg Asp Phe Ser  
225 230 240

Val Val Gly Val Leu Ile Gly Val Ser Lys Asn Leu Leu Leu Glu Val  
245 250 255

Leu Val Phe Ala Asn Lys Phe Cys Cys Glu Arg Leu Lys Asp Ala Cys  
260 265 270

Asp Arg Glu Leu Ala Ser Leu Ile Ser Ser Met Glu Cys Ala Ile Glu  
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Leu Met Asp Phe Ala Leu Glu Glu Asn Ser Pro Ile Leu Ala Ser Ser  
290 295 300

Cys Leu Gln Val Phe Leu Tyr Glu Met Pro Asp Ser Leu Asn Asp Glu  
305 310 315 320

Arg Val Val Glu Val Leu Thr Arg Val Asn Arg Ser Gln Val Ser Thr  
325 330 335

Met Ala Gly Lys Ala Pro Phe Ser Leu Tyr Ser Cys Leu Ser Glu Val  
340 345 350

Ser Met Cys Ile Asp Pro Arg Ser Asp Arg Thr Leu Gly Phe Leu Glu  
355 360 365

Lys Leu Val Asp Phe Ala Glu Asn Asp Arg Gln Gln Val Leu Gly Phe  
370 375 380

His Arg Leu Gly Cys Met Arg Leu Leu Arg Lys Glu Tyr Arg Glu Ala  
385 390 395 400

Glu Glu Ala Phe Glu Thr Ala Phe Asn Leu Gly His Val Tyr Ser Ala  
405 410 415

Thr Gly Leu Ala Arg Leu Gly Tyr Ile Gln Gly His Arg Leu Trp Ala  
420 425 430

Tyr Glu Lys Leu Ser Ser Val Ile Ser Ser Val Ser Pro Pro Leu Gly  
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Trp Met Tyr Gln Glu Arg Ser Phe Tyr Cys Glu Gly Asp Lys Lys Leu  
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Glu Asp Leu Glu Lys Ala Thr Glu Leu Asp Pro Thr Leu Thr Tyr Pro  
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 Ala Ala Leu Arg Asp Ile Gln Ala Ala Leu Thr Leu Cys Pro Asp Tyr  
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 Arg Met Phe Asp Gly Lys Val Ala Gly Arg Gln Leu Gln Thr Leu Val  
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 Tyr Glu His Val Glu Asn Trp Thr Thr Ala Asp Cys Trp Met Gln Leu  
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 Tyr Glu Lys Trp Ser Asn Val Asp Asp Ile Gly Ser Leu Ser Val Ile  
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 Tyr Gln Met Leu Glu Ser Asp Ala Cys Lys Gly Val Leu Tyr Phe Arg  
 595 600 605  
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 Ser Leu Gln Leu Ala Arg Glu His Ala Ser Ser Asp His Glu Arg Leu  
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 Val Tyr Glu Gly Trp Ile Leu Tyr Asp Thr Gly His Cys Glu Glu Gly  
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 Tyr Phe Leu Gln Ala Tyr Ala Leu Ala Glu Ser Ser Leu Asp Pro Ser  
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Tyr Val Asp Cys Glu Lys Leu Asp Leu Ala Ala Asp Cys Tyr Ile Asn  
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Ala Leu Lys Val Arg His Thr Arg Ala His Gln Gly Leu Ala Arg Val  
740 745 750

His Phe Leu Arg Asn Asp Lys Ala Ala Tyr Glu Glu Met Thr Arg  
755 760 765

Leu Ile Glu Lys Ala Gln Asn Asn Ala Ser Ala Tyr Glu Lys Arg Ser  
770 775 780

Glu Tyr Cys Asp Arg Glu Leu Ala Lys Ser Asp Leu Glu Met Val Thr  
785 790 795 800

Arg Leu Asp Pro Leu Arg Val Tyr Pro Tyr Arg Tyr Arg Ala Ala Val  
805 810 815

Leu Met Asp Ser Arg Lys Glu Arg Glu Ala Ile Thr Glu Leu Ser Arg  
820 825 830

Ala Ile Ala Phe Lys Ala Asp Leu His Leu Leu His Leu Arg Ala Ala  
835 840 845

Phe His Glu His Ile Gly Asp Val Thr Ser Ala Leu Arg Asp Cys Arg  
850 855 860

Ala Ala Leu Ser Val Asp Pro Asn His Gln Glu Met Leu Glu Leu His  
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Ser Arg Val Asn Ser His Glu Pro  
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<210> 1067

<211> 1833

<212> DNA

<213> Arabidopsis thaliana

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<210> 1068

<211> 610

<212> PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1068

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          20          25          30
Leu Ala Pro Ala Ala Ala Thr Val Ser Asp Leu Ala Asn Gly Ala Thr
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Asn Val Lys Ser Leu Pro Ser Asn Ser Ser Pro Phe Gly Val Lys Val
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Arg Asp Phe His Val Lys Ser Val Pro Ser Glu Phe Arg Ser Ser Ile
65          70          75          80
Val Ser Ser Ala Gly Phe Ala Ala Gln Glu Tyr Ala Pro Ser Tyr Glu
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Asn Asp Gly Gly Ile Gly Asp Ser Glu Ser Val Gly Ser Ser Gly Gly
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Gly Asp Gly Leu Ala Ile Ala Asp Leu Gly Ile Ser Pro Glu Ile Val
115          120          125
Lys Ala Leu Lys Gly Arg Gly Ile Glu Lys Leu Phe Pro Ile Gln Lys
130          135          140
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Arg Thr Gly Thr Gly Lys Thr Leu Ala Phe Gly Ile Pro Ile Ile Asp
          165          170          175
Lys Ile Ile Lys Phe Asn Ala Lys His Gly Arg Gly Lys Asn Pro Gln
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Cys Leu Val Leu Ala Pro Thr Arg Glu Leu Ala Arg Gln Val Glu Lys
195          200          205
Glu Phe Arg Glu Ser Ala Pro Ser Leu Asp Thr Ile Cys Leu Tyr Gly
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Ala Leu Asn Leu Ser Glu Val Gln Phe Val Val Leu Asp Glu Ala Asp  
260 265 270

Gln Met Leu Gln Val Gly Phe Ala Glu Asp Val Glu Ile Ile Leu Gln  
275 280 285

Lys Leu Pro Ala Lys Arg Gln Ser Met Met Phe Ser Ala Thr Met Pro  
290 295 300

Ser Trp Ile Arg Ser Leu Thr Lys Lys Tyr Leu Asn Asn Pro Leu Thr  
305 310 315 320

Ile Asp Leu Val Gly Asp Ser Asp Gln Lys Leu Ala Asp Gly Ile Thr  
325 330 335

Met Tyr Ser Ile Ala Ala Asp Ser Tyr Gly Arg Ala Ser Ile Ile Gly  
340 345 350

Pro Leu Val Lys Glu His Gly Lys Gly Gly Lys Cys Ile Val Phe Thr  
355 360 365

Gln Thr Lys Arg Asp Ala Asp Arg Leu Ala Phe Gly Leu Ala Lys Ser  
370 375 380

Tyr Lys Cys Glu Ala Leu His Gly Asp Ile Ser Gln Ala Gln Arg Glu  
385 390 395 400

Arg Thr Leu Ala Gly Phe Arg Asp Gly Asn Phe Ser Ile Leu Val Ala  
405 410 415

Thr Asp Val Ala Ala Arg Gly Leu Asp Val Pro Asn Val Asp Leu Val  
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Ile His Tyr Glu Leu Pro Asn Asn Thr Glu Thr Phe Val His Arg Thr  
435 440 445

Gly Arg Thr Gly Arg Ala Gly Lys Lys Gly Ser Ala Ile Leu Ile His  
450 455 460

Gly Gln Asp Gln Thr Arg Ala Val Lys Met Ile Glu Lys Glu Val Gly  
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Ser Arg Phe Asn Glu Leu Pro Ser Ile Ala Val Glu Arg Gly Ser Ala

Ser Met Phe Glu Gly Val Gly Ala Arg Ser Gly Gly Ser Phe Gly Gly  
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Arg Ser Gly Gly Gly Ser Tyr Gly Gly Tyr Gly Gly Ser Ser Gly Arg  
530 535 540

Ser Gly Gly Gly Gly Ser Tyr Gly Gly Ser Gly Gly Ser Ser Ser  
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Arg Tyr Ser Gly Gly Ser Asp Arg Ser Ser Gly Phe Gly Ser Phe Gly  
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<211> 1395

<212> DNA

<213> Arabidopsis thaliana

<400> 1069

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<211> 464

<212> PRT

<213> Arabidopsis thaliana

<400> 1070

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Ser Asn Gly Asp Ser Tyr Leu Thr Ala Pro Glu Glu Glu His Gly Leu  
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Ser Pro Asp Gln Ile Tyr Arg Tyr Ser Arg Gln Leu Leu Leu Pro Ser  
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047-E2F-PCT.ST25.txt

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 Cys Gly Val Gly Gln Leu Gly Ile Ile Asp His Asp Val Val Glu Leu  
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 Asn Asn Met His Arg Gln Ile Ile His Thr Glu Ala Phe Ile Gly His  
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 Pro Lys Val Lys Ser Ala Ala Ala Ala Cys Arg Ser Ile Asn Ser Thr  
 145 150 155 160  
 Ile Lys Val Asp Glu Tyr Val Glu Ala Leu Arg Thr Ser Asn Ala Leu  
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 Glu Ile Leu Ser Gln Tyr Asp Ile Ile Val Asp Ala Thr Asp Asn Pro  
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 Pro Ser Arg Tyr Met Ile Ser Asp Cys Cys Val Leu Leu Gly Lys Pro  
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047-E2F-PCT.ST25.txt

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355 360 365

Pro Ser His His Tyr Lys Ile Val Ser Leu Pro Asp Ser Leu Asn Ile  
370 375 380

Pro Leu Ala Asn Leu Glu Thr Arg Leu Asn Glu Leu Thr Ser Ala Leu  
385 390 395 400

Lys Glu Lys Gly Asn Gly His Ala Asn Thr Glu Ser Cys Thr Asn Pro  
405 410 415

Ser Val Phe Val Val Cys Arg Arg Gly Asn Asp Ser Gln Arg Ala Val  
420 425 430

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<210> 1071

<211> 564

<212> DNA

<213> Arabidopsis thaliana

<400> 1071

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&lt;210&gt; 1072

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&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1072

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35 40 45Leu Lys Gln Arg Arg Ser Trp Gly Glu Asn Leu Thr Phe Tyr Thr Gly  
50 55 60Thr Gly Tyr Leu Ala Gly Ser Val Ala Gly Ala Ser Ala Gly Ile Phe  
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85 90 95Asn Arg Ile Leu Asn Ser Ser Gly Gln Ala Gly Arg Thr Trp Gly Asn  
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115 120 125Val Ala Val Thr Asp Lys Asp Asp Val Trp Thr Ser Val Val Ala Gly  
130 135 140Leu Gly Thr Gly Ala Val Phe Arg Ala Ala Arg Gly Val Arg Ser Ala  
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&lt;210&gt; 1073

&lt;211&gt; 1674

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1073

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<211> 557

<212> PRT

<213> Arabidopsis thaliana

<400> 1074

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35 40 45

Ser Phe Arg Thr Arg Val Lys Pro Ile Gln Ser Asn Asn Gly Gly Thr  
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Gly Glu Met Ser Ser Arg Ala Arg Val Met Ser Ala Pro Ser Ser Ile  
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His Gly Ala Ala Glu Arg Asp Leu Leu Ala Gly Val Tyr His Asp Glu  
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Gln Asp Glu Gln Pro Arg Asp Pro Arg Thr Ser Thr Lys Glu Ser Ser  
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Pro Gln Pro Leu Pro Leu Pro Ser Pro Arg Thr Gly Ser Ser Leu Lys  
115 120 125

Asn Trp Gly Ser Phe Lys Ser Phe Asn Gly Ser Ser Gly Arg Leu Ser  
130 135 140

Ser Ser Ala Ala Val Ser Gly Pro Leu Pro Leu Pro Pro Ser Gly Ser  
145 150 155 160

Val Arg Ser Phe Ser Tyr Asp Glu Val Met Ala Ala Cys Asn Ala Phe  
165 170 175

Ser Ser Asp Arg Cys Val Met Glu Gly Leu Ser Ser Val Met Tyr Met  
180 185 190

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Ala Ser Phe Gly Asp Glu Ala Ser Thr Ser Gly Leu Lys Lys Val Asp  
195 200 205

Ala Thr Val Val Arg Leu His Val Ile Thr Gln Ser Ile Arg Glu Phe  
210 215 220

Ile Asn Glu Val Asn Thr Leu Ala Ser Leu Gln His Gln Asn Leu Cys  
225 230 235 240

Lys Leu Val Gly Tyr His Ala Arg Asp Gly Ser Asp Thr Arg Met Leu  
245 250 255

Val Tyr Glu Arg Leu Ala Leu Gly Ser Leu Asp Arg Leu Leu His Gly  
260 265 270

Arg Ser Asp Gly Pro Pro Leu Asp Trp Asn Thr Arg Met Lys Ile Ala  
275 280 285

Leu Cys Ala Ala Gln Gly Leu Thr Phe Leu His Glu Glu Gly Pro Phe  
290 295 300

Gln Ala Met Tyr Asn Glu Phe Ser Thr Ala Asn Ile Gln Val Asp Lys  
305 310 315 320

Asp Phe Ser Ala Lys Leu Ser Gly Tyr Gly Cys Ala Gly His Ala Pro  
325 330 335

Glu Thr Glu Thr Ser Asn Ser Ser Ala Leu Ala Asn Leu Ser Val Glu  
340 345 350

Thr Leu Glu Arg Gly Leu Leu Thr Pro Lys Ser Asn Val Trp Ser Tyr  
355 360 365

Gly Ile Val Leu Leu Glu Met Leu Thr Gly Arg Lys Asn Met Asp Gly  
370 375 380

Ser Tyr Pro Lys Glu Glu Arg Asn Leu Val Lys Trp Ser Arg Ala Phe  
385 390 395 400

Leu Ala Asp Asp Cys Arg Leu Ser Leu Ile Met Asp Pro Gln Leu Lys  
405 410 415

Gly Arg Phe Pro Ala Lys Ala Ala Arg Ser Ile Ala Asp Ile Ala Gln  
420 425 430

Lys Cys Leu Gln Val Glu Pro Ser Glu Arg Pro Thr Met Arg Asn Ile

435

440

445

Val Asp Gln Leu Lys Ile Ile Gln Asp Met Lys Tyr Ser Cys Arg Phe  
 450 455 460

Pro Leu Arg Glu Pro Ala Pro Val Val Ala Arg Lys His Met Gly Arg  
 465 470 475 480

Ser Ser Ser Leu Asn Thr Ile Ile Trp Thr Pro Ala Ser Val Pro Pro  
 485 490 495

Arg Ser Ser Phe Ser Pro Ser Pro Pro Arg Arg Pro Ser Val Ser  
 500 505 510

Pro Thr Arg Gly Arg Thr Leu Val Phe Pro Pro Val Phe Pro Pro Arg  
 515 520 525

Ala Cys Ser Ser Leu Glu Glu Met Ala Arg Glu Glu Val Arg Arg Ser  
 530 535 540

Ser Ser Ala Ser Gly Arg Arg Thr Ser Leu Glu Gly Phe  
 545 550 555

&lt;210&gt; 1075

&lt;211&gt; 1074

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1075

atggaaggtt cctcgtcagc catcgcgagg aagacatggg agctagagaa caacattctc	60
ccagtggaac caaccgattc agcctccgac agtatattcc actacgacga cgcttcacaa	120
gccaaaatcc agcaggagaa gccatgggcc tccgaccta actacttcaa gcgcgttcac	180
atctcagccc ttgctcttct caagatgggtg gttcacgctc gtcctgggtg cacaatcgag	240
atcatgggtc ttatgcaggg taaaaccgag ggtgatacaa tcatcgttat ggatgctttt	300
gctttgcctg ttgaaggtac tgagactagg gttaatgctc agtctgatgc ctatgagtat	360
atggttgaat actctcagac cagcaagctg gctgggaggt tggagaacgt tgttgatgg	420
tatcactctc accctgggta tggatgttgg ctctcgggta ttgatgttc gacacagatg	480
cttaaccaac agtatcagga gccattctta gctgttgta ttgatccaac aaggactgtt	540
tcggctggta aggttgagat tggggcattc agaacatatc cagagggaca taagatctcg	600
gatgatcatg tttctgagta tcagactatc cctcttaaca agattgagga ctttggtgta	660



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cattgcaaac agtactactc attggacatc acttatttca agtcactctc cgatagtcac	720
cttctggatc tcctttggaa caagtactgg gtgaacactc tttcttcttc cccactgttg	780
ggcaatggag actatgttgc cgggcaaata tcagacttgg ctgagaagct cgagcaagcg	840
gagagtgcgc tcgctaactc ccggtatgga ggaattgcgc cagccggtca ccaaaggagg	900
aaagaggatg agcctcaact cgcgaagata actcgggata gtgcaaagat aactgtcgag	960
caggtccatg gactaatgtc acaggttatc aaagacatct tgttcaattc cgctcgtag	1020
tccaagaagt ctgctgacga ctcatcagat ccagagccca tgattacatc gtga	1074

<210> 1076

<211> 357

<212> PRT

<213> Arabidopsis thaliana

<400> 1076

Met Glu Gly Ser	Ser Ser Ala Ile Ala Arg Lys Thr Trp Glu Leu Glu
1	5 10 15

Asn Asn Ile Leu Pro Val Glu Pro Thr Asp Ser Ala Ser Asp Ser Ile
20 25 30

Phe His Tyr Asp Asp Ala Ser Gln Ala Lys Ile Gln Gln Glu Lys Pro
35 40 45

Trp Ala Ser Asp Pro Asn Tyr Phe Lys Arg Val His Ile Ser Ala Leu
50 55 60

Ala Leu Leu Lys Met Val Val His Ala Arg Ser Gly Gly Thr Ile Glu
65 70 75 80

Ile Met Gly Leu Met Gln Gly Lys Thr Glu Gly Asp Thr Ile Ile Val
85 90 95

Met Asp Ala Phe Ala Leu Pro Val Glu Gly Thr Glu Thr Arg Val Asn
100 105 110

Ala Gln Ser Asp Ala Tyr Glu Tyr Met Val Glu Tyr Ser Gln Thr Ser
115 120 125

Lys Leu Ala Gly Arg Leu Glu Asn Val Val Gly Trp Tyr His Ser His
130 135 140

047-E2F-PCT.ST25.txt

Pro Gly Tyr Gly Cys Trp Leu Ser Gly Ile Asp Val Ser Thr Gln Met  
145 150 155 160

Leu Asn Gln Gln Tyr Gln Glu Pro Phe Leu Ala Val Val Ile Asp Pro  
165 170 175

Thr Arg Thr Val Ser Ala Gly Lys Val Glu Ile Gly Ala Phe Arg Thr  
180 185 190

Tyr Pro Glu Gly His Lys Ile Ser Asp Asp His Val Ser Glu Tyr Gln  
195 200 205

Thr Ile Pro Leu Asn Lys Ile Glu Asp Phe Gly Val His Cys Lys Gln  
210 215 220

Tyr Tyr Ser Leu Asp Ile Thr Tyr Phe Lys Ser Ser Leu Asp Ser His  
225 230 235 240

Leu Leu Asp Leu Leu Trp Asn Lys Tyr Trp Val Asn Thr Leu Ser Ser  
245 250 255

Ser Pro Leu Leu Gly Asn Gly Asp Tyr Val Ala Gly Gln Ile Ser Asp  
260 265 270

Leu Ala Glu Lys Leu Glu Gln Ala Glu Ser Gln Leu Ala Asn Ser Arg  
275 280 285

Tyr Gly Gly Ile Ala Pro Ala Gly His Gln Arg Arg Lys Glu Asp Glu  
290 295 300

Pro Gln Leu Ala Lys Ile Thr Arg Asp Ser Ala Lys Ile Thr Val Glu  
305 310 315 320

Gln Val His Gly Leu Met Ser Gln Val Ile Lys Asp Ile Leu Phe Asn  
325 330 335

Ser Ala Arg Gln Ser Lys Lys Ser Ala Asp Asp Ser Ser Asp Pro Glu  
340 345 350

Pro Met Ile Thr Ser  
355

<210> 1077

<211> 993

<212> DNA

<213> *Arabidopsis thaliana*

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<400> 1077
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tcaaacgcgc gagttccacc acttccgacg accggattcg ttctccaaaa aggcgaagaa    180
cgaacaatca gcgctccaac ttcatgggga ggaagattct gggggagaac tcaatgttcc    240
accgacaccg acggaaaaat cacttgctct accggagatt gcggatctgg taccctcgaa    300
tgctccggat ccggagcaac accaccagca acactagcgg aattcacact agacggatct    360
aacggactcg atttctacga cgtagtctct gtcgacggtt acaacgtccc gatgctagtg    420
gtccacaag gaggctcggg tttaaactgt agcagcaccg gatgcgttgt agatctgaac    480
ggttcgtgtc cgtcggagct taaagtgcgc agtttagacg gcagaggtaa acaatccatg    540
ggatgtaaaa gcgcgtgtga agcttttctg acgccggagt attgttgtag cggcgccac    600
ggtacacctg acacgtgtaa accgtcgtcg tactcgttga tgtttaaac tgcgtgtcca    660
cgtgcttaca gctacgctta cgatgacgag agtagtacct tcacatgtgc tgaatctcct    720
aattacgtta tcacgttttg cctactctct aacaccagtc aaaaatcatc tcaagatcag    780
agcccagatc caaaaccgac gacaccaacc gggacgtcgt cgacaactcc tgccggagat    840
agtagtacga cgtggtcacc ggtagatata tcaatgatat acgaaggagc tttggatcaa    900
aacaaggatg caccgtccac gtgtcatctt tcgttatgtg gaatcacagt cacacttgcg    960
ctggcctttt gtcggatgtg gcggctcttt tga                                993

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&lt;210&gt; 1078

&lt;211&gt; 330

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

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<400> 1078
Met Ala Leu Pro Leu Pro Leu Ile Phe Leu Ile Phe Ser His Leu Phe
1      5      10      15
Val Ser Gly Val Arg Ser Thr Ser Phe Ile Met Val Asn Lys Cys Glu
20     25     30
Tyr Thr Val Trp Pro Gly Leu Leu Ser Asn Ala Gly Val Pro Pro Leu
35     40     45

```

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Pro Thr Thr Gly Phe Val Leu Gln Lys Gly Glu Arg Thr Ile Ser  
50 55 60

Ala Pro Thr Ser Trp Gly Gly Arg Phe Trp Gly Arg Thr Gln Cys Ser  
65 70 75 80

Thr Asp Thr Asp Gly Lys Phe Thr Cys Leu Thr Gly Asp Cys Gly Ser  
85 90 95

Gly Thr Leu Glu Cys Ser Gly Ser Gly Ala Thr Pro Pro Ala Thr Leu  
100 105 110

Ala Glu Phe Thr Leu Asp Gly Ser Asn Gly Leu Asp Phe Tyr Asp Val  
115 120 125

Ser Leu Val Asp Gly Tyr Asn Val Pro Met Leu Val Ala Pro Gln Gly  
130 135 140

Gly Ser Gly Leu Asn Cys Ser Ser Thr Gly Cys Val Val Asp Leu Asn  
145 150 155 160

Gly Ser Cys Pro Ser Glu Leu Lys Val Thr Ser Leu Asp Gly Arg Gly  
165 170 175

Lys Gln Ser Met Gly Cys Lys Ser Ala Cys Glu Ala Phe Arg Thr Pro  
180 185 190

Glu Tyr Cys Cys Ser Gly Ala His Gly Thr Pro Asp Thr Cys Lys Pro  
195 200 205

Ser Ser Tyr Ser Leu Met Phe Lys Thr Ala Cys Pro Arg Ala Tyr Ser  
210 215 220

Tyr Ala Tyr Asp Asp Gln Ser Ser Thr Phe Thr Cys Ala Glu Ser Pro  
225 230 235 240

Asn Tyr Val Ile Thr Phe Cys Pro Thr Pro Asn Thr Ser Gln Lys Ser  
245 250 255

Ser Gln Asp Gln Ser Pro Asp Pro Lys Pro Thr Thr Pro Thr Gly Thr  
260 265 270

Ser Ser Thr Thr Pro Ala Gly Asp Ser Ser Thr Thr Trp Ser Pro Val  
275 280 285

Asp Thr Ser Met Ile Tyr Glu Gly Ala Leu Asp Gln Asn Lys Gly Ser  
290 295 300

Pro Ser Thr Cys His Leu Ser Leu Cys Gly Ile Thr Val Thr Leu Ala  
 305 310 315 320

Leu Ala Phe Cys Arg Met Trp Arg Leu Phe  
 325 330

<210> 1079

<211> 1140

<212> DNA

<213> Arabidopsis thaliana

<400> 1079  
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 aacgagttta tctggccgga tctgaaaaac aaagtgaag cttcaaagaa gagatcgaat 120  
 aagcgatccg atttcttcga tcttgacgat gatttcgaag ctgatttcca agggtttaag 180  
 gatgactcgg cttttgactg cgaagacgat gatgatgtct tcgtcaatgt taagcctttc 240  
 gtcttcaccg caactactaa gcccgtagct tccgctttcg tctccactgg tatatatttg 300  
 gtaggttcag catatgccaa gaaaactgta gagtccgctg agcaagctga gaaatcttct 360  
 aagaggaaga ggaagaatca ataccgaggg attaggcagc gtccttgggg aaaatgggct 420  
 gcggagatcc gtgatccgag aaaaggctcc cgagaatggc ttggaacatt cgacactgct 480  
 gaggaagcag caagagctta tgatgctgca gcacgcagaa tccgtggcac gaaagctaag 540  
 gtgaattttc ccgaggagaa gaacctagc gtcgtatccc agaaacgtcc tagtgctaag 600  
 actaataatc ttcagaaatc agtggctaaa ccaaacaaaa gcgtaacttt ggttcagcag 660  
 ccaacacatc tgagtgcaga gtactgcaac aactcctttg acaactcttt tgggtgatatg 720  
 agtttcatgg aagagaagcc tcagatgtac aacaatcagt ttgggttaac aaactcgttc 780  
 gatgctggag gtaacaatgg ataccagtat ttcagttccg atcagggcag taactccttc 840  
 gactgttctg agttcgggtg gagtgatcac ggcctctaaa caccgcagat ctcttcaatg 900  
 cttgtcaata acaacgaagc atcatttgtt gaagaaacca atgcagccaa gaagctcaaa 960  
 ccaaactctg atgagtcaga cgatctgatg gcataccttg acaacgcctt gtgggacacc 1020  
 ccactagaag tggaaagccat gcttggcgca gatgctggtg ctgtgactca ggaagaggaa 1080  
 aaccagtgag agctatggag cttagatgag atcaatttca tgctggaaag agacttttga 1140

<210> 1080

<211> 379

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1080

Met Cys Gly Gly Ala Ile Ile Ser Asp Phe Ile Pro Pro Pro Arg Ser  
1 5 10 15

Leu Arg Val Thr Asn Glu Phe Ile Trp Pro Asp Leu Lys Asn Lys Val  
20 25 30

Lys Ala Ser Lys Lys Arg Ser Asn Lys Arg Ser Asp Phe Asp Leu  
35 40 45

Asp Asp Asp Phe Glu Ala Asp Phe Gln Gly Phe Lys Asp Asp Ser Ala  
50 55 60

Phe Asp Cys Glu Asp Asp Asp Asp Val Phe Val Asn Val Lys Pro Phe  
65 70 75 80

Val Phe Thr Ala Thr Thr Lys Pro Val Ala Ser Ala Phe Val Ser Thr  
85 90 95

Gly Ile Tyr Leu Val Gly Ser Ala Tyr Ala Lys Lys Thr Val Glu Ser  
100 105 110

Ala Glu Gln Ala Glu Lys Ser Ser Lys Arg Lys Arg Lys Asn Gln Tyr  
115 120 125

Arg Gly Ile Arg Gln Arg Pro Trp Gly Lys Trp Ala Ala Glu Ile Arg  
130 135 140

Asp Pro Arg Lys Gly Ser Arg Glu Trp Leu Gly Thr Phe Asp Thr Ala  
145 150 155 160

Glu Glu Ala Ala Arg Ala Tyr Asp Ala Ala Ala Arg Arg Ile Arg Gly  
165 170 175

Thr Lys Ala Lys Val Asn Phe Pro Glu Glu Lys Asn Pro Ser Val Val  
180 185 190

Ser Gln Lys Arg Pro Ser Ala Lys Thr Asn Asn Leu Gln Lys Ser Val  
195 200 205

Ala Lys Pro Asn Lys Ser Val Thr Leu Val Gln Gln Pro Thr His Leu  
210 215 220

Ser Gln Gln Tyr Cys Asn Asn Ser Phe Asp Asn Ser Phe Gly Asp Met  
225 230 235 240

Ser Phe Met Glu Glu Lys Pro Gln Met Tyr Asn Asn Gln Phe Gly Leu  
245 250 255

Thr Asn Ser Phe Asp Ala Gly Gly Asn Asn Gly Tyr Gln Tyr Phe Ser  
260 265 270

Ser Asp Gln Gly Ser Asn Ser Phe Asp Cys Ser Glu Phe Gly Trp Ser  
275 280 285

Asp His Gly Pro Lys Thr Pro Glu Ile Ser Ser Met Leu Val Asn Asn  
290 295 300

Asn Glu Ala Ser Phe Val Glu Glu Thr Asn Ala Ala Lys Lys Leu Lys  
305 310 315 320

Pro Asn Ser Asp Glu Ser Asp Asp Leu Met Ala Tyr Leu Asp Asn Ala  
325 330 335

Leu Trp Asp Thr Pro Leu Glu Val Glu Ala Met Leu Gly Ala Asp Ala  
340 345 350

Gly Ala Val Thr Gln Glu Glu Glu Asn Pro Val Glu Leu Trp Ser Leu  
355 360 365

Asp Glu Ile Asn Phe Met Leu Glu Gly Asp Phe  
370 375

<210> 1081

<211> 936

<212> DNA

<213> Arabidopsis thaliana

<400> 1081  
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cttctcgagt cagcagatct aaacggttca aaagagtttg caatcttagc tcaagagaca 120  
gagccactcc tcgaaggcac cgatcaaadc ctcgccgtcg tcgatgtctt acttctcatca 180  
gcaccagaga atcgtatcaa aaaccaacca aactgggtaca aaatccttca gatcgaagat 240  
ctaactgaat catcaacaga caacgatcta atcaagaaac aataccgtcg tcttgtctctt 300

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cttctccacc ctgacaaaaa ccgtttccct ttcgccgatac aagctttcag attcgtgctt 360
gatgcatggg aagttctatc aacacctacg aagaaatctc aattcgaagg agatttgaat 420
ctcatcttca ctaaagtaaa tctcaacct cagaaatcga agaagaaaac aacaacgaat 480
gagaagatgt ctacgttttg gacggcgtgt ccgtactgtt acagtcctca tgagtatcct 540
agggtttata aagagtattg tattagatgt caaaactgtc aaagagcgtt tcacgtgcg 600
agtattcctc agttgccttc gttgatacct ggtaagatg agtattattg ttgttggggt 660
ttttttccga tggggtttgt tgggtgtaaa ggaggagaag ctgccattgc taatggagta 720
gatgcagcta agttccctaa ttggatgcct ccggttttct catccggcgg cgttcagct 780
cctccaagtg gtaatgggtg tagttttgat ggatggctag gtggtgcggc gaagagagat 840
aatgaggctg tgaggagtaa taatggtgtt ggagttaatt cagatggaac accgaagaag 900
agaggaagag gaaggccgaa gaagaatccg gtttag 936

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&lt;210&gt; 1082

&lt;211&gt; 311

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1082

```

Met Gly Asp Asn Asn Pro Asn Arg Ser Glu Ala Glu Arg Leu Leu Gly
1      5      10      15

```

```

Ile Ala Glu Lys Leu Leu Glu Ser Arg Asp Leu Asn Gly Ser Lys Glu
20      25      30

```

```

Phe Ala Ile Leu Ala Gln Glu Thr Glu Pro Leu Leu Glu Gly Thr Asp
35      40      45

```

```

Gln Ile Leu Ala Val Val Asp Val Leu Leu Ser Ser Ala Pro Glu Asn
50      55      60

```

```

Arg Ile Lys Asn Gln Pro Asn Trp Tyr Lys Ile Leu Gln Ile Glu Asp
65      70      75      80

```

```

Leu Thr Glu Ser Ser Thr Asp Asn Asp Leu Ile Lys Lys Gln Tyr Arg
85      90      95

```

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Arg Leu Ala Leu Leu Leu His Pro Asp Lys Asn Arg Phe Pro Phe Ala
100      105      110

```



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Asp Gln Ala Phe Arg Phe Val Leu Asp Ala Trp Glu Val Leu Ser Thr  
115 120 125

Pro Thr Lys Lys Ser Gln Phe Asp Gly Asp Leu Asn Leu Ile Phe Thr  
130 135 140

Lys Val Asn Leu Asn Thr Gln Lys Ser Lys Lys Lys Thr Thr Thr Asn  
145 150 155 160

Glu Lys Met Ser Thr Phe Trp Thr Ala Cys Pro Tyr Cys Tyr Ser Leu  
165 170 175

His Glu Tyr Pro Arg Val Tyr Gln Glu Tyr Cys Ile Arg Cys Gln Asn  
180 185 190

Cys Gln Arg Ala Phe His Ala Ala Ser Ile Pro Gln Leu Pro Pro Leu  
195 200 205

Ile Pro Gly Lys Asp Glu Tyr Tyr Cys Cys Trp Gly Phe Phe Pro Met  
210 215 220

Gly Phe Val Gly Gly Lys Gly Gly Glu Ala Ala Ile Ala Asn Gly Val  
225 230 235 240

Asp Ala Ala Lys Phe Pro Asn Trp Met Pro Pro Val Phe Ser Ser Gly  
245 250 255

Gly Val Ala Ala Pro Pro Ser Gly Asn Gly Val Ser Phe Asp Gly Trp  
260 265 270

Ser Gly Gly Ala Ala Lys Arg Asp Asn Glu Ala Val Arg Ser Asn Asn  
275 280 285

Gly Val Gly Val Asn Ser Asp Gly Thr Pro Lys Lys Arg Gly Arg Gly  
290 295 300

Arg Pro Lys Lys Asn Pro Val  
305 310

<210> 1083

<211> 648

<212> DNA

<213> Arabidopsis thaliana

<400> 1083

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ccaccgtctc cgtcaacgat gttaccttct ccatcatctt cttcagcgcc gacgaaaaga	180
atagatccgt ccgagctcaa acgcgttttc cagatgttcg acaagaacgg tgacgggtcga	240
atcacaaagg aagagctcaa cgactcgctt gagaatcttg gaatctacat accagacaaa	300
gatctgactc aaatgatcca caagatcgat gctaacggtg atggatgcgt cgacatagac	360
gagtttgagt cgctgtacag ctcgattgtg gatgagcatc acaacgatgg cgaacacagag	420
gaagaggata tgaaagatgc gtttaacgtg ttgaccaag acggagatgg gtttatcact	480
gtggaggagt tgaatctgtg gatggcttcc ttgggactca agcaagggaa gaccctagat	540
ggttgtaaga agatgattat gcaagttgat gcagatggtg atggtagagt caattacaaa	600
gagtttcttc agatgatgaa aggtggtggc tttagcagca gtaattga	648

&lt;210&gt; 1084

&lt;211&gt; 215

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1084

Met Val Arg Ile Phe Leu Leu Tyr Asn Ile Leu Asn Ser Phe Leu Leu	
1 5 10 15	

Ser Leu Val Pro Lys Lys Leu Arg Thr Leu Phe Pro Leu Ser Trp Phe	
20 25 30	

Asp Lys Thr Leu His Lys Asn Ser Pro Pro Ser Pro Ser Thr Met Leu	
35 40 45	

Pro Ser Pro Ser Ser Ser Ser Ala Pro Thr Lys Arg Ile Asp Pro Ser	
50 55 60	

Glu Leu Lys Arg Val Phe Gln Met Phe Asp Lys Asn Gly Asp Gly Arg	
65 70 75 80	

Ile Thr Lys Glu Glu Leu Asn Asp Ser Leu Glu Asn Leu Gly Ile Tyr	
85 90 95	

Ile Pro Asp Lys Asp Leu Thr Gln Met Ile His Lys Ile Asp Ala Asn	
100 105 110	

Gly Asp Gly Cys Val Asp Ile Asp Glu Phe Glu Ser Leu Tyr Ser Ser  
 115 120

Ile Val Asp Glu His His Asn Asp Gly Glu Thr Glu Glu Glu Asp Met  
 130 135 140

Lys Asp Ala Phe Asn Val Phe Asp Gln Asp Gly Asp Gly Phe Ile Thr  
 145 150 155 160

Val Glu Glu Leu Lys Ser Val Met Ala Ser Leu Gly Leu Lys Gln Gly  
 165 170 175

Lys Thr Leu Asp Gly Cys Lys Lys Met Ile Met Gln Val Asp Ala Asp  
 180 185 190

Gly Asp Gly Arg Val Asn Tyr Lys Glu Phe Leu Gln Met Met Lys Gly  
 195 200 205

Gly Gly Phe Ser Ser Ser Asn  
 210 215

<210> 1085

<211> 483

<212> DNA

<213> Arabidopsis thaliana

<400> 1085  
 atggagagtg aaggaaagat tgtgttcaca gaagagcaag aggcctctgt agtgaagtct 60  
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 gagattgcac caacaacgaa gaagatgttc tctttcttga gagactcacc aattcctgct 180  
 gagcaaaatc caaagctcaa gcctcacgca atgtctgttt ttgtcatgtg ttgtgaatca 240  
 gcagtacaac tgaggaaaac agggaaaagt acggtgaggg agactacttt gaagagactt 300  
 ggagccagcc attctaataa cggtgtcgtt gacgaacact ttgaggtggc caagtatgca 360  
 ttgttgagga cgataaagga ggcagtgcg gagatgtggt caccggagat gaaggtggct 420  
 tggggtcagg cttatgatca ccttgttgct gccattaag ctgaaatgaa tctttccaac 480  
 taa 483

<210> 1086

<211> 160

<212> PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1086

Met Glu Ser Glu Gly Lys Ile Val Phe Thr Glu Glu Gln Glu Ala Leu  
1 5 10 15Val Val Lys Ser Trp Ser Val Met Lys Lys Asn Ser Ala Glu Leu Gly  
20 25 30Leu Lys Leu Phe Ile Lys Ile Phe Glu Ile Ala Pro Thr Lys Lys  
35 40 45Met Phe Ser Phe Leu Arg Asp Ser Pro Ile Pro Ala Glu Gln Asn Pro  
50 55 60Lys Leu Lys Pro His Ala Met Ser Val Phe Val Met Cys Cys Glu Ser  
65 70 75 80Ala Val Gln Leu Arg Lys Thr Gly Lys Val Thr Val Arg Glu Thr Thr  
85 90 95Leu Lys Arg Leu Gly Ala Ser His Ser Lys Tyr Gly Val Val Asp Glu  
100 105 110His Phe Glu Val Ala Lys Tyr Ala Leu Leu Glu Thr Ile Lys Glu Ala  
115 120 125Val Pro Glu Met Trp Ser Pro Glu Met Lys Val Ala Trp Gly Gln Ala  
130 135 140Tyr Asp His Leu Val Ala Ala Ile Lys Ala Glu Met Asn Leu Ser Asn  
145 150 155 160

&lt;210&gt; 1087

&lt;211&gt; 411

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1087

atggcttctt gcaacaaact tagcgggtatc ttgagacaag gggtttctca gagctcaaatt 60

ggctcagtta catctatgct tggctctctt cgttacatgt cctctaagct ttttgggtt 120

ggctctctctt ggggaactga tgacagctcc ttaaagcaag ctttcactag ctttgggtgaa 180

## 047-E2F-PCT.ST25.txt

gtcacagaag caacggtgat tgcagacaga gagacagga ggtcgagggg attcggattt 240  
 gttagcttca gctgtgagga ttctgctaac aatgccataa aagaaatgga tggaaggag 300  
 ctgaatgga ggcaaatccg tgtgaatctt gcaaccgaaa gatcgagtgc cccgagatca 360  
 tcatttggtg gtggtggcgc ttacggtggt ggcggtggtg gtggctacta a 411

&lt;210&gt; 1088

&lt;211&gt; 136

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1088

Met Ala Phe Cys Asn Lys Leu Ser Gly Ile Leu Arg Gln Gly Val Ser  
 1 5 10 15

Gln Ser Ser Asn Gly Pro Val Thr Ser Met Leu Gly Ser Leu Arg Tyr  
 20 25 30

Met Ser Ser Lys Leu Phe Val Gly Gly Leu Ser Trp Gly Thr Asp Asp  
 35 40 45

Ser Ser Leu Lys Gln Ala Phe Thr Ser Phe Gly Glu Val Thr Glu Ala  
 50 55 60

Thr Val Ile Ala Asp Arg Glu Thr Gly Arg Ser Arg Gly Phe Gly Phe  
 65 70 75 80

Val Ser Phe Ser Cys Glu Asp Ser Ala Asn Asn Ala Ile Lys Glu Met  
 85 90 95

Asp Gly Lys Glu Leu Asn Gly Arg Gln Ile Arg Val Asn Leu Ala Thr  
 100 105 110

Glu Arg Ser Ser Ala Pro Arg Ser Ser Phe Gly Gly Gly Gly Tyr  
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Gly Gly Gly Gly Gly Gly Tyr  
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&lt;210&gt; 1089

&lt;211&gt; 2163

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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tga 2163

<210> 1090

<211> 720

<212> PRT

<213> Arabidopsis thaliana

<400> 1090

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Ser Ile Ser Ala Ala Thr Ala Pro Val Pro Pro Pro Leu Pro Pro His  
20 25 30

Val Thr Ser Ser Tyr Pro Glu Ser Leu Asp Ser Ser Pro Arg Ser Arg  
35 40 45

Thr Thr Asp Gly Trp Asp Asp Leu Pro Ala Pro Ser Gly Gly Gly Gly  
50 55 60

Gly Gly Gly Gly Ser Ala Val Ser Ser Lys Leu Arg Phe Met Cys Ser  
65 70 75 80

Tyr Gly Gly His Ile Leu Pro Arg Pro His Asp Lys Ser Leu Cys Tyr  
85 90 95

Met Gly Gly Asp Thr Arg Ile Val Val Val Asp Arg Asn Ser Ser Leu  
100 105 110

Pro Ser Leu Ile Ala Arg Leu Ser Asn Thr Leu Leu Asp Gly Arg Ser  
115 120 125

Phe Thr Leu Lys Tyr Gln Leu Pro Ser Glu Asp Leu Asp Ser Leu Ile  
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140

Ser Val Thr Thr Asp Glu Asp Leu Asp Asn Met Ile Glu Glu Tyr Asp  
 145 150 155 160  
 Arg Thr Ile Ser Ala Ser Asn Ser Thr Lys Pro Ser Arg Leu Arg Leu  
 165 170 175  
 Phe Leu Phe Thr Ser Lys Pro Glu Ala Thr Gln Ser Met Gly Gln Ile  
 180 185 190  
 Leu Glu Ser Ser Ala Lys Ser Asp Asp Trp Phe Leu Asn Ala Leu Asn  
 195 200 205  
 Ser Ala Gly Leu Leu Asn Arg Gly Phe Ser Asp Ser Asp Thr Asn Val  
 210 215 220  
 Asn Arg Leu Leu Gly Leu Asp Asp Ala Leu Ala Leu Arg Ser Asn Ser  
 225 230 235 240  
 Gly Asp Asn Asn Asn Arg Asp Gly Asp Asp Gly Ser Val Lys Ser Ala  
 245 250 255  
 Lys Gln Gln Gln Pro Pro Pro Pro Gln Gln Gln Glu Gln Gln Gly  
 260 265 270  
 Gly Gln Asp Val Asn Cys Leu Pro Asp Ser Pro Met Leu Asp Thr Ser  
 275 280 285  
 Ser Ser Phe Gly Ser Thr Ser Ser Ser Pro Ser Leu Ala Asn Leu Pro  
 290 295 300  
 Pro Ile Arg Val His Val Glu Glu Pro Gly Gly Val Arg Thr Leu Pro  
 305 310 315 320  
 Asp Gln Arg Asn Leu Gly Ile Glu Glu Gln Phe Ala Arg Phe Asn Val  
 325 330 335  
 Gly Asn Lys His Gln Leu His Asp Asp Gly Phe Ala Ala Ile Ser Ser  
 340 345 350  
 Pro Pro Pro Met Pro Val Thr Ile Ala Leu Pro Ala Ala Pro Val Thr  
 355 360 365  
 Ala Ala Thr Val Ser Asn Glu Phe Gln Ala Arg Val Tyr Ser Asp Asp  
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Glu Arg Ser Asp His Gly Val Gln Ala Gly Tyr Arg Lys Pro Pro Thr  
 385 390 395 400  
 Pro Arg Ser Gln Pro Gln Asn Leu Pro Pro Gln Gln Ala His Gln Leu  
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 Lys Ser Asn Ser Gly Gly Gly His Glu Leu Pro Ser Pro Asn Ser Val  
 420 425 430  
 Ser Ser Asp Ser Ser Met Ser Asn Pro Met Phe His Gln Arg Pro Ser  
 435 440 445  
 Val Tyr Gln Glu Pro Ile Ala Gln Ile Pro Ser Gly Ser Thr Val Val  
 450 455 460  
 Thr Gly Met Ile Asn Pro Ser Asp Pro Ser Thr Leu Leu Ser Gln His  
 465 470 475 480  
 Gln Asn Gln Asp Pro Ala Tyr Ile Leu His Pro Gln Phe Glu Gln Gln  
 485 490 495  
 Ser Ala Gln Ser Gln Pro Gln Gln Gln Phe Ile His Thr Ala Ala Pro  
 500 505 510  
 Pro Gln Tyr Ile His His His Pro Ser Ser Gly Leu Pro Val Pro Thr  
 515 520 525  
 Tyr Ile Gln Val Tyr Pro Ser Gln Gln Pro Gln Gln Ser Phe His Gln  
 530 535 540  
 His Ala Gly Arg Leu Asp Gln Gln Pro Tyr Pro Val Tyr Tyr Val Thr  
 545 550 555 560  
 Ala Pro Val Pro Pro Arg Pro Tyr Ser Met Pro Val Pro Gln Ser Pro  
 565 570 575  
 Ser Val Ser Asp Ala Ala Gly Ser Ile Pro Ser Asn His Pro Asn Ser  
 580 585 590  
 Thr Met Met Pro Pro Pro Pro Asn Asn His Met Arg Ser Val Ser Ser  
 595 600 605  
 Gly Lys Pro Glu Met Gly Gln Ala Gly Val Tyr Thr Thr Ala Pro Gly  
 610 615 620  
 Val Gly Gly Ala Gln Met Val His Gln Ile Pro Thr Asn Gln Gln Gln  
 625 630 635 640

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Phe Met Gly Tyr Ser Gln Ile Arg His Pro Pro Gln Ser Gly Ser Ala  
645 650 655

Gly Asn Pro Asn Tyr Gly Tyr Glu Tyr Val Asp Asn Ala His Thr Gln  
660 665 670

Ile Tyr Tyr Thr Gln Pro Met Gly His Ala Gln Tyr Gln Thr Met Thr  
675 680 685

Gly Pro Pro Pro Ala Met Val Met Pro Asp Gly Ser Ala Ala Ala Lys  
690 695 700

Leu Pro Ala Glu Asn Met Thr Gln Gln Ile Arg Ser Ser Gln Pro Leu  
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<211> 831

<212> DNA

<213> Arabidopsis thaliana

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gccaacacgc ttttatccgc cgggtgatct ccagcgatgg tccattccgt cgttgagatt 180  
cctgatttca ctctcatat tcacgcgctc tgcgtcaacg tcggaacact tacacctgac 240  
tggcttccgt caatgaaaag tgccgctgaa ctgcgttctc agctccgaaa gccttggggt 300  
cttgatcccc ccgccgtgag ttgctccgga ttccgattaa aagcgtgttt ggagctcatc 360  
gagctaaaac ctactgtaat caaaggaaac ggttctgaga ttattgtctc ctccctgtgt 420  
tcacgtggac aaactaaggg tgctgatagc tcacatgaat caacagacgc tatagaagct 480  
gcaaagtcat tagcgtatgc aagtgggtgct gttgttgagc tgtcaggagc tgttgatatt 540  
gttactgatg ggaacaggt tattggtgtt cacaacggga cgaagatgat gcaacagatt 600  
actgcaactg gttgttctct agctggtttg attgtagcgt ttctgtgcat tgattcatca 660  
cgggtactgg aagctacggt ttccgctatg gctgtctttg gcattgcagg tgagttgggt 720  
gaagcgatgg cgaatgggtc agcgtcattg agaatgcatt tgatagattg tctttatggg 780  
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<210> 1092

&lt;211&gt; 276

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1092

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His Leu Thr Ala Val Arg Gln Gln Ser Pro Leu Val Gln Cys Ile Thr  
 20 25 30

Asn Phe Val Ser Met Asp Leu Val Ala Asn Thr Leu Leu Ser Ala Gly  
 35 40 45

Ala Ser Pro Ala Met Val His Ser Val Val Glu Ile Pro Asp Phe Thr  
 50 55 60

Pro His Ile His Ala Leu Cys Val Asn Val Gly Thr Leu Thr Pro Asp  
 65 70 75 80

Trp Leu Pro Ser Met Lys Ala Ala Ala Glu Leu Ala Ser Gln Leu Arg  
 85 90 95

Lys Pro Trp Val Leu Asp Pro Ala Ala Val Ser Cys Ser Gly Phe Arg  
 100 105 110

Leu Lys Ala Cys Leu Glu Leu Ile Glu Leu Lys Pro Thr Val Ile Lys  
 115 120 125

Gly Asn Gly Ser Glu Ile Ile Ala Leu Ser Ser Ala Ser Arg Gly Gln  
 130 135 140

Thr Lys Gly Ala Asp Ser Ser His Glu Ser Thr Asp Ala Ile Glu Ala  
 145 150 155 160

Ala Lys Ser Leu Ala Met Ser Ser Gly Ala Val Val Ala Val Ser Gly  
 165 170 175

Ala Val Asp Ile Val Thr Asp Gly Lys Gln Val Ile Gly Val His Asn  
 180 185 190

Gly Thr Lys Met Met Gln Gln Ile Thr Ala Thr Gly Cys Ser Leu Ala  
 195 200 205

Gly Leu Ile Val Ala Phe Leu Ala Ile Asp Ser Ser Arg Val Leu Glu  
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215

Ala Thr Val Ser Ala Met Ala Val Phe Gly Ile Ala Gly Glu Leu Gly  
225 230 235 240

Glu Ala Met Ala Asn Gly Pro Ala Ser Leu Arg Met His Leu Ile Asp  
245 250 255

Cys Leu Tyr Gly Leu Asp Glu Thr Thr Val Leu Lys Arg Val Asn Val  
260 265 270

Thr Arg Leu Gly  
275

&lt;210&gt; 1093

&lt;211&gt; 732

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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cgtactggag gcagttttgc tgtttgggga ggtttattct cgacatttga ctgtaccatg 240  
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gttttcttgc ctttgattga aggagctggg atcatgttga acaagggtact ggctcagcct 420  
cagaatatga tgatggagga ccctggaatg caaggatgc ctgggatgca ggaatgacag 480  
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tcacatcat catcatggtt tggagggtt tttgataaga aaaaggagga ggtgaacca 660  
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&lt;210&gt; 1094

&lt;211&gt; 243

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1094

Met Gly Thr Pro Glu Thr Ser Arg Glu Pro Cys Pro Asp Arg Ile Leu  
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 Phe His Phe Ile Lys Gly Thr Tyr Asn Ser Pro Lys Gly Ser Arg Phe  
 35 40 45  
 Val Gly Gly Thr Gln Ser Val Ser Met Asn Ala Pro Arg Thr Gly Gly  
 50 55 60  
 Ser Phe Ala Val Trp Gly Gly Leu Phe Ser Thr Phe Asp Cys Thr Met  
 65 70 75 80  
 Val Tyr Leu Arg Gln Lys Glu Asp Pro Trp Asn Ser Ile Ile Ala Gly  
 85 90 95  
 Ala Ala Thr Gly Gly Phe Leu Ser Met Arg Gln Gly Ala Gly Ala Ala  
 100 105 110  
 Ser Arg Ser Ala Ile Phe Gly Gly Val Leu Leu Ala Leu Ile Glu Gly  
 115 120 125  
 Ala Gly Ile Met Leu Asn Lys Val Leu Ala Gln Pro Gln Asn Met Met  
 130 135 140  
 Met Glu Asp Pro Gly Met Gln Gly Met Pro Gly Met Gln Gly Met Gln  
 145 150 155 160  
 Gly Met Pro Gly Met Pro Gly Met Gln Gly Met Pro Gly Met Gln Gly  
 165 170 175  
 Met Gln Met Gly Gln Met Gln Ser Gln Ala Gln Ile Arg Ser Glu Ser  
 180 185 190  
 Gln Asn Gln Asn Thr Ala Ser Ser Ser Ser Ser Ser Trp Phe Gly  
 195 200  
 Gly Leu Phe Asp Lys Lys Lys Glu Glu Val Gln Pro Gly Ser Glu Ser  
 210 215 220  
 Lys Thr Glu Val Leu Glu Ser Phe Asp Ala Pro Pro Val Pro Ser Phe  
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225

230

235

240

Glu Phe Lys

&lt;210&gt; 1095

&lt;211&gt; 2391

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1095

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<210> 1096

<211> 796

<212> PRT

<213> Arabidopsis thaliana

<400> 1096

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Ser Lys Thr Lys Gly Val Val Arg Trp Ala Leu Gln Glu Phe Ala Ser  
20 25 30

Gln Glu His Val Val Phe Lys Leu Leu His Val Gln Pro Arg Asp Ser  
35 40 45

Asn Ser Val Ser Thr Thr Arg Lys Asp Leu Thr Thr Ser Val Tyr Lys  
50 55 60

047-E2F-PCT.ST25.txt

Lys Asp Val Asp Arg Lys Thr Arg Glu Met Leu Leu Pro Ser Arg Asp  
 65 70 75 80  
 Met Phe Val His Arg Glu Val Gln Leu Asp Ile Met Val Leu Glu Ser  
 85 90 95  
 Asp Asp Ile Ala Asp Ala Ile Ser Lys Ala Val Gln Asp His Gly Ile  
 100 105 110  
 Ser Glu Leu Val Ile Gly Ala Ser Ser Ile Ile Phe Ser Trp Lys  
 115 120 125  
 Leu Lys Arg Ser Asn Leu Ser Ser Arg Ile Ala Asp Ala Thr Pro Arg  
 130 135 140  
 Phe Cys Ser Val His Val Ile Ser Lys Gly Lys Leu Leu Asn Val Arg  
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 Lys Ser Asp Met Asp Thr Glu Thr Ser Ile Ala Asp Asp Arg Ser Glu  
 165 170 175  
 Ser Arg Phe Ser Ser Asp Ser His Ser Gly Thr Val Ser Ser Thr Ser  
 180 185 190  
 Ser His Gln Phe Ser Ser Thr Pro Leu Leu Phe Gln Arg Ile Gln Ala  
 195 200 205  
 Leu Thr Thr Val Asn Gln Lys Val Gly Thr Asn Ile Gly Lys Gln Asn  
 210 215 220  
 Asn Glu Pro His His His His Asn Arg Ala Gly Ser Leu Asp Val  
 225 230 235 240  
 Asp Glu Ser Lys Leu Leu Asn Gln Lys Gly Phe Tyr Arg Thr Ser Ser  
 245 250 255  
 Ser Gly Ile Gly Tyr Gly Gly Ser Asp Ile Ser Ser Trp Arg Ser Ser  
 260 265 270  
 Gln Met Glu Glu Ala Ser Ser Ser Ser Thr Tyr Ser Asp Pro Thr Ser  
 275 280 285  
 Ser Ser Ser Gln Ile His Lys Asp Phe Glu Leu Glu Lys Leu Lys Ile  
 290 295 300  
 Glu Leu Arg His Ile Lys Gly Met Tyr Ala Val Ala Gln Ser Glu Val  
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Ile Asp Ala Ser Lys Lys Met Gln Asp Leu Asn Gln Arg Arg Ser Glu  
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340 345 350

Glu Val Val Glu Met Glu Arg Glu Arg Gln Glu Asp Ala Glu Asn Glu  
355 360 365

Ala Glu Leu Val Arg Glu Cys Ile Glu Arg Glu Thr Glu Glu Arg Leu  
370 375 380

Glu Ala Glu Ala Arg Ala Glu Glu Val Arg Lys Glu Lys Gln Arg Leu  
385 390 395 400

Glu Asp Ala Leu Glu Gly Gly Pro Leu Gln Arg Gln Gln Tyr Met Lys  
405 410 415

Phe Glu Trp Glu Glu Ile Val Glu Ala Thr Ser Ser Phe Ser Asp Glu  
420 425 430

Leu Lys Ile Gly Val Gly Gly Tyr Gly Ser Val Tyr Arg Cys Asn Leu  
435 440 445

His His Thr Thr Val Ala Val Lys Val Leu His Ser Asp Lys Ser Ser  
450 455 460

Leu Thr Lys Gln Phe His Gln Glu Leu Glu Ile Leu Ser Lys Ile Arg  
465 470 475 480

His Pro His Leu Leu Leu Leu Gly Ala Cys Pro Glu Arg Gly Ser  
485 490 495

Leu Val Tyr Glu Tyr Met His Asn Gly Ser Leu Glu Glu Arg Leu Met  
500 505 510

Lys Arg Arg Pro Asn Val Asp Thr Pro Gln Pro Pro Pro Leu Arg Trp  
515 520 525

Phe Glu Arg Phe Arg Ile Ala Trp Glu Ile Ala Ser Ala Leu Tyr Phe  
530 535 540

Leu His Thr Asn Glu Pro Arg Pro Ile Val His Arg Asp Leu Lys Pro  
545 550 555 560

Ala Asn Ile Leu Leu Asp Arg Asn Asn Val Ser Lys Ile Gly Asp Val

Gly Leu Ser Lys Met Val Asn Leu Asp Pro Ser His Ala Ser Thr Val  
 580 585 590  
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 595 600 605  
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 610 615 620  
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 645 650 655  
 Glu Ile Leu Asp Lys Thr Ala Gly Asp Trp Pro Val Lys Glu Ala Lys  
 660 665 670  
 Glu Met Val Met Ile Gly Leu Arg Cys Ala Glu Met Arg Lys Arg Asp  
 675 680 685  
 Arg Pro Asp Leu Gly Lys Glu Ile Leu Pro Val Leu Glu Arg Leu Lys  
 690 695 700  
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 His His His Asn Ala Pro Thr His Phe Tyr Cys Pro Ile Thr Lys Asp  
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 Val Met Glu Asn Pro Cys Val Ala Ser Asp Gly Tyr Thr Tyr Glu Lys  
 740 745 750  
 Arg Ala Ile Lys Glu Trp Leu Gln Lys Asn His Lys Ser Pro Met Thr  
 755 760 765  
 Asp Leu Pro Phe Pro Ser Asp Ser Leu Leu Pro Asn His Ser Leu Leu  
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&lt;210&gt; 1097

&lt;211&gt; 1515

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1097

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&lt;210&gt; 1098

&lt;211&gt; 504

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1098

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 35 40 45

Val Ser Ala Ser Ile Pro Pro Gln Gly Ala Gly Ala Gly Ala Ser Ser  
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Ser Ala Pro His Tyr Arg Asn Tyr Pro Pro Pro Gln Gln Leu Phe Gln  
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His Ser Thr Asn Gln Pro Gln Arg Val Asp Pro Leu Pro Pro Gln Glu  
 85 90 95

Thr Ala Gln Gln Asp Pro Pro Leu Ser Pro Asp Pro Glu Thr Ala Ser  
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His Ser His Pro Ser Ser Gln Gly Asn Asn Phe Gln Glu Gly Ile Pro  
 115 120 125

Ala Val Leu Pro Glu Leu Gln Glu Asp Ser Val Val Ala Leu Asn Asp  
 130 135 140

Ile Leu Ser Val Pro Gly Arg Glu Ala Trp Cys Cys Val Leu Ser Pro  
 145 150 155 160

Ile Pro Arg Pro Lys Thr Glu Trp Phe Thr Arg Asp Arg Gly Ser Arg  
 165 170 175

Leu Val Arg Lys Ile Thr Arg Ile Phe Leu Gln Lys Phe Asp Ala Pro  
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Phe Tyr Asn Trp Ser Cys Val Pro Val Asp Lys Arg Glu Arg Leu Phe  
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Leu Glu Phe Ala Lys Thr His His Trp Asp Pro Leu Ile Thr Gly Thr  
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 275 280 285  
 Ile Gly Pro His Val His Tyr Ser Gly Pro Lys Ser Phe Gln Glu Ile  
 290 295 300  
 Gln Asp Glu Leu Glu Glu Lys Leu Gly Arg Pro Val His Leu Gly Glu  
 305 310 315 320  
 Val Phe Ile Glu Thr His Thr Lys Ser Asp Gly Ser Phe Val Asp Gln  
 325 330 335  
 Lys Ser Glu Lys Ile Ala Gln Ala Tyr Gln Gln Asn Val Arg Asp Arg  
 340 345 350  
 Leu Ser Ala Leu Glu Ala Ser Ala Ser Ala Val Ser Asp Gly Ser Ser  
 355 360 365  
 Arg Pro Pro Glu Leu Thr Leu Asp Asp Tyr Thr Ala Ile Phe Leu Glu  
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 Ser Thr Glu Lys Asp Ser Arg Gly Asn Pro Tyr Gly Leu Gly Cys Leu  
 385 390 395 400  
 Lys Asp Thr Leu Gly Ser Ala Asn Arg Asn His Ser Gly Ser Ser Ser  
 405 410 415  
 Ser Phe Gln Ala Leu Glu Glu Arg Leu Gln Glu Ala Gln Arg Lys Ile  
 420 425 430  
 Glu Glu Gln Ala Ala Tyr Asn Glu Lys Arg Asp Ala Glu Ile Ala Ala  
 435 440 445  
 Arg Glu Ala Glu Ser Ser Arg Val Thr Ala Glu Gln Lys Asp Lys Leu  
 450 455 460  
 Glu Gln Leu Ser Leu Val Glu Lys Tyr Leu Arg Gln Thr Asp Pro Gln  
 Page 1703

465

470

475

480

Phe Leu Asp Phe Met Ala Ser His Ser Thr Thr Thr Thr Glu Arg Ile  
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Pro Ser Pro Pro Pro Asn Asp Pro  
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&lt;210&gt; 1099

&lt;211&gt; 1887

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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 cagcaagatg tatccatag gttctaa 1887

<210> 1100

<211> 628

<212> PRT

<213> Arabidopsis thaliana

<400> 1100

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Asp Glu Leu Glu Arg Arg Met Trp Arg Asp Lys Met Arg Leu Lys Arg  
 50 55 60

Leu Lys Glu Gln Asp Lys Gly Lys Glu Gly Val Asp Ala Ala Lys Gln  
 65 70 75 80

Arg Gln Ser Gln Glu Gln Ala Arg Arg Lys Lys Met Ser Arg Ala Gln  
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Asp Gly Ile Leu Lys Tyr Met Leu Lys Met Met Glu Val Cys Lys Ala  
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 Ile Pro Gly Ile His Glu Gly Asn Asn Pro Ile Gly Pro Thr Pro His  
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 Thr Leu Gln Glu Leu Gln Asp Thr Thr Leu Gly Ser Leu Leu Ser Ala  
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 Leu Met Gln His Cys Asp Pro Pro Gln Arg Arg Phe Pro Leu Glu Lys  
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 Gly Val Pro Pro Pro Trp Trp Pro Asn Gly Lys Glu Asp Trp Trp Pro  
 210 215 220  
 Gln Leu Gly Leu Pro Lys Asp Gln Gly Pro Ala Pro Tyr Lys Lys Pro  
 225 230 235 240  
 His Asp Leu Lys Lys Ala Trp Lys Val Gly Val Leu Thr Ala Val Ile  
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 Lys His Met Phe Pro Asp Ile Ala Lys Ile Arg Lys Leu Val Arg Gln  
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 His Tyr Glu Val Glu Glu Leu Lys Pro Glu Lys Val Met Asn Ser Ser  
 340 345 350  
 Asn Phe Gly Met Val Ala Lys Met His Asp Phe Pro Val Lys Glu Glu  
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Val Pro Ala Gly Asn Ser Glu Phe Met Arg Lys Arg Lys Pro Asn Arg  
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Asp Leu Asn Thr Ile Met Asp Arg Thr Val Phe Thr Cys Glu Asn Leu  
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Gly Cys Ala His Ser Glu Ile Ser Arg Gly Phe Leu Asp Arg Asn Ser  
405 410 415

Arg Asp Asn His Gln Leu Ala Cys Pro His Arg Asp Ser Arg Leu Pro  
420 425 430

Tyr Gly Ala Ala Pro Ser Arg Phe His Val Asn Glu Val Lys Pro Val  
435 440 445

Val Gly Phe Pro Gln Pro Arg Pro Val Asn Ser Val Ala Gln Pro Ile  
450 455 460

Asp Leu Thr Gly Ile Val Pro Glu Asp Gly Gln Lys Met Ile Ser Glu  
465 470 475 480

Leu Met Ser Met Tyr Asp Arg Asn Val Gln Ser Asn Gln Thr Ser Met  
485 490 495

Val Met Glu Asn Gln Ser Val Ser Leu Leu Gln Pro Thr Val His Asn  
500 505 510

His Gln Glu His Leu Gln Phe Pro Gly Asn Met Val Glu Gly Ser Phe  
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Phe Glu Asp Leu Asn Ile Pro Asn Arg Ala Asn Asn Asn Ser Ser  
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Asn Asn Gln Thr Phe Phe Gln Gly Asn Asn Asn Asn Val Phe  
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Lys Phe Asp Thr Ala Asp His Asn Asn Phe Glu Ala Ala His Asn  
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Asn Asn Asn Ser Ser Gly Asn Arg Phe Gln Leu Val Phe Asp Ser Thr  
580 585 590

Pro Phe Asp Met Ala Ser Phe Asp Tyr Arg Asp Asp Met Ser Met Pro  
595 600 605

Gly Val Val Gly Thr Met Asp Gly Met Gln Gln Lys Gln Gln Asp Val  
Page 1707

610

615

620

Ser Ile Trp Phe  
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&lt;211&gt; 2691

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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<212> PRT

<213> Arabidopsis thaliana

<400> 1102

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Page 1709

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50 55 60  
Thr Val Lys Glu Pro Ile Gln Asn Ile Lys Val Lys Gly Tyr Ile Thr  
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Ala Gln Glu Glu Phe Leu Glu Gly Ile Thr Trp Ser Arg Gly Leu Asp  
85 90 95  
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115 120 125  
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Ile Thr Phe Thr Cys Glu Ser Trp Val Ala Pro Lys Ser Val Asp Pro  
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Thr Lys Arg Ile Phe Phe Ser Asp Lys Ser Tyr Leu Pro Ser Gln Thr  
195 200 205  
Pro Glu Pro Leu Lys Lys Tyr Arg Lys Glu Glu Leu Glu Thr Leu Gln  
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Gly Lys Asn Arg Glu Glu Val Gly Glu Phe Thr Lys Phe Glu Arg Ile  
225 230 235 240  
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His Pro Ile Tyr Arg Leu Leu His Pro His Phe Arg Tyr Thr Met Glu  
580 585 590

Ile Asn Ala Arg Ala Arg Gln Ser Leu Val Asn Gly Gly Ile Ile  
595 600 605

Glu Thr Cys Phe Trp Pro Gly Lys Tyr Ala Leu Glu Leu Ser Ser Ala  
610 615 620

Val Tyr Gly Lys Leu Trp Arg Phe Asp Gln Glu Gly Leu Pro Ala Asp  
625 630 635 640

Leu Ile Lys Arg Gly Leu Ala Glu Glu Asp Lys Thr Ala Glu His Gly  
645 650 655

Val Arg Leu Thr Ile Pro Asp Tyr Pro Phe Ala Asn Asp Gly Leu Ile  
660 665 670

Leu Trp Asp Ala Ile Lys Glu Trp Val Thr Asp Tyr Val Lys His Tyr  
675 680 685

Tyr Pro Asp Glu Glu Leu Ile Thr Ser Asp Glu Glu Leu Gln Gly Trp  
690 695 700

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705 710 715 720

Trp Trp Pro Val Leu Lys Thr Gln Asp Asp Leu Ile Gly Val Val Thr  
725 730 735

Thr Ile Ala Trp Val Thr Ser Gly His His Ala Ala Val Asn Phe Gly  
740 745 750

Gln Tyr Gly Tyr Gly Gly Tyr Phe Pro Asn Arg Pro Thr Thr Thr Arg  
755 760 765

Ile Arg Met Pro Thr Glu Asp Pro Thr Asp Glu Ala Leu Lys Glu Phe  
770 775 780

Tyr Glu Ser Pro Glu Lys Val Leu Leu Lys Thr Tyr Pro Ser Gln Lys  
785 790 795 800

Gln Ala Thr Leu Val Met Val Thr Leu Asp Leu Leu Ser Thr His Ser  
805 810 815

Pro Asp Glu Glu Tyr Ile Gly Glu Gln Gln Glu Ala Ser Trp Ala Asn  
820 825 830

Glu Pro Val Ile Asn Ala Ala Phe Glu Arg Phe Lys Gly Lys Leu Gln  
835 840 845

Tyr Leu Glu Gly Val Ile Asp Glu Arg Asn Val Asn Ile Thr Leu Lys  
850 855 860

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&lt;210&gt; 1104

&lt;211&gt; 327

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1104

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Met Thr Ile Gly Ser Phe Phe Ser Ser Leu Leu Phe Trp Arg Asn Ser
1      5      10

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Gln Asp Gln Glu Ala Gln Arg Gly Arg Met Gln Glu Ile Asp Leu Ser
20     25     30

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Val His Thr Ile Lys Ser His Gly Gly Arg Val Ala Ser Lys His Lys
35     40     45

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His Asp Trp Ile Ile Leu Val Ile Leu Ile Ala Ile Glu Ile Gly Leu
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Asn Leu Ile Ser Pro Phe Tyr Arg Tyr Val Gly Lys Asp Met Met Thr
65     70     75     80

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Asp Leu Lys Tyr Pro Phe Lys Asp Asn Thr Val Pro Ile Trp Ser Val
85     90     95

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Pro Val Tyr Ala Val Leu Leu Pro Ile Ile Val Phe Val Cys Phe Tyr
100    105    110

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Leu Lys Arg Thr Cys Val Tyr Asp Leu His His Ser Ile Leu Gly Leu
115    120

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Leu Phe Ala Val Leu Ile Thr Gly Val Ile Thr Asp Ser Ile Lys Val
130    135    140

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Ala Thr Gly Arg Pro Arg Pro Asn Phe Tyr Trp Arg Cys Phe Pro Asp
145    150    155    160

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Gly Lys Glu Leu Tyr Asp Ala Leu Gly Gly Val Val Cys His Gly Lys  
165 170 175

Ala Ala Glu Val Lys Glu Gly His Lys Ser Phe Pro Ser Gly His Thr  
180 185 190

Ser Trp Ser Phe Ala Gly Leu Thr Phe Leu Ser Leu Tyr Leu Ser Gly  
195 200 205

Lys Ile Lys Ala Phe Asn Asn Glu Gly His Val Ala Lys Leu Cys Leu  
210 215 220

Val Ile Phe Pro Leu Leu Ala Ala Cys Leu Val Gly Ile Ser Arg Val  
225 230 235 240

Asp Asp Tyr Trp His His Trp Gln Asp Val Phe Ala Gly Ala Leu Ile  
245 250 255

Gly Thr Leu Val Ala Ala Phe Cys Tyr Arg Gln Phe Tyr Pro Asn Pro  
260 265 270

Tyr His Glu Glu Gly Trp Gly Pro Tyr Ala Tyr Phe Lys Ala Ala Gln  
275 280 285

Glu Arg Gly Val Pro Val Thr Ser Ser Gln Asn Gly Asp Ala Leu Arg  
290 295 300

Ala Met Ser Leu Gln Met Asp Ser Thr Ser Leu Glu Asn Met Glu Ser  
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Gly Thr Ser Thr Ala Pro Arg  
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<210> 1105

<211> 378

<212> DNA

<213> Arabidopsis thaliana

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aacttcaggg tataccaatt gttaggtgaa gctgggactt attacggtgt tcgattcggg	180

aagaacatac catgggttac agaggtccca tttggagtca ttagagatcc acagtatggt 240  
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 gccaaatcca tctcatga 378

<210> 1106

<211> 125

<212> PRT

<213> *Arabidopsis thaliana*

<400> 1106

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Phe Ser Val Ala Ser Leu Ser Trp Pro Pro Pro Leu Tyr Phe Trp Pro  
 20 25 30

Leu Met Ala Phe Gly Gln Phe Leu Asn Phe Arg Val Tyr Gln Leu Leu  
 35 40 45

Gly Glu Ala Gly Thr Tyr Tyr Gly Val Arg Phe Gly Lys Asn Ile Pro  
 50 55 60

Trp Val Thr Glu Phe Pro Phe Gly Val Ile Arg Asp Pro Gln Tyr Val  
 65 70 75 80

Gly Ser Ile Met Ser Leu Leu Ala Cys Leu Ser Trp Val Pro Phe Gln  
 85 90 95

Tyr Ile Leu Leu Trp Ser Leu Gly Tyr Val Phe Met Met Phe Leu Glu  
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<210> 1107

<211> 2022

<212> DNA

<213> *Arabidopsis thaliana*

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ccgtcttggt aggtttacgg gcttgtcgaa tggctgtaca tggcttggt ctcggttcga	420
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gcttcacaac ttgattggcc aaaagatagg atcttaattc aagtattaga tgattcagac	720
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acaccaaate ctgatttcct caagaagact gttcctcatt tcaagggtaa tccagagcta	960
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caaaacataa acttatgttt ccacttcgaa gtagaacaac aagtgaacgg tgtgtttctc	1080
aatttcttcg gattcaatgg aaccgctgga gtatggagga tcaaggcatt ggaagaatcc	1140
ggcggatggc tcgagagaac caccgtggaa gatatggata tcgcggttag agcgcatctc	1200
aacggctgga agttttattha ctttaatgat gttgaagta cttgcgagtt gccagagtct	1260
tatgaagctt acaagaagca acaacatcgt tggcattccg gtcctatgca gctgttccgg	1320
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<210> 1108

<211> 673

<212> PRT

<213> Arabidopsis thaliana

<400> 1108

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 Arg Lys Ser Ile Ser Pro Lys Gln Phe Ser Trp Phe Leu Leu Leu Lys  
 35 40 45  
 Ala His Arg Leu Ile Ser Cys Leu Ser Trp Leu Val Ser Ser Val Lys  
 50 55 60  
 Lys Arg Ile Ala Phe Ser Ala Lys Asn Ile Asn Glu Glu Glu Asp Pro  
 65 70 75 80  
 Lys Ser Arg Gly Lys Gln Met Tyr Arg Phe Ile Lys Ala Cys Leu Val  
 85 90 95  
 Ile Ser Ile Ile Ala Leu Ser Ile Glu Ile Val Ala His Phe Lys Lys  
 100 105 110  
 Trp Asn Leu Asp Leu Ile Asn Arg Pro Ser Trp Glu Val Tyr Gly Leu  
 115 120 125  
 Val Glu Trp Ser Tyr Met Ala Trp Leu Ser Phe Arg Ser Asp Tyr Ile  
 130 135 140  
 Ala Pro Leu Val Ile Ser Leu Ser Arg Phe Cys Thr Val Leu Phe Leu  
 145 150 155  
 Ile Gln Ser Leu Asp Arg Leu Val Leu Cys Leu Gly Cys Phe Trp Ile  
 165 170 175

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Lys Phe Lys Lys Ile Glu Pro Lys Leu Thr Glu Glu Ser Ile Asp Leu  
 180 185 190  
 Glu Asp Pro Ser Ser Phe Pro Met Val Leu Ile Gln Ile Pro Met Cys  
 195 200 205  
 Asn Glu Arg Glu Val Tyr Glu Gln Ser Ile Gly Ala Ala Ser Gln Leu  
 210 215 220  
 Asp Trp Pro Lys Asp Arg Ile Leu Ile Gln Val Leu Asp Asp Ser Asp  
 225 230 235 240  
 Asp Pro Asn Leu Gln Leu Leu Ile Lys Glu Glu Val Ser Val Trp Ala  
 245 250 255  
 Glu Lys Gly Val Asn Ile Ile Tyr Arg His Arg Leu Ile Arg Thr Gly  
 260 265 270  
 Tyr Lys Ala Gly Asn Leu Lys Ser Ala Met Thr Cys Asp Tyr Val Lys  
 275 280 285  
 Asp Tyr Glu Phe Val Thr Ile Phe Asp Ala Asp Phe Thr Pro Asn Pro  
 290 295 300  
 Asp Phe Leu Lys Lys Thr Val Pro His Phe Lys Gly Asn Pro Glu Leu  
 305 310 315 320  
 Gly Leu Val Gln Ala Arg Trp Ser Phe Val Asn Lys Asp Glu Asn Leu  
 325 330 335  
 Leu Thr Arg Leu Gln Asn Ile Asn Leu Cys Phe His Phe Glu Val Glu  
 340 345 350  
 Gln Gln Val Asn Gly Val Phe Leu Asn Phe Phe Gly Phe Asn Gly Thr  
 355 360 365  
 Ala Gly Val Trp Arg Ile Lys Ala Leu Glu Glu Ser Gly Gly Trp Leu  
 370 375 380  
 Glu Arg Thr Thr Val Glu Asp Met Asp Ile Ala Val Arg Ala His Leu  
 385 390 395 400  
 Asn Gly Trp Lys Phe Ile Tyr Leu Asn Asp Val Glu Val Thr Cys Glu  
 405 410 415  
 Leu Pro Glu Ser Tyr Glu Ala Tyr Lys Lys Gln Gln His Arg Trp His  
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047-E2F-PCT.ST25.txt

Ser Gly Pro Met Gln Leu Phe Arg Leu Cys Leu Pro Ser Ile Ile Lys  
435 440 445

Ser Lys Ile Ser Val Trp Lys Lys Ala Asn Leu Ile Phe Leu Phe Phe  
450 455 460

Leu Leu Arg Lys Leu Ile Leu Pro Phe Tyr Ser Phe Thr Leu Phe Cys  
465 470 475 480

Ile Ile Leu Pro Leu Thr Met Phe Ile Pro Glu Ala Glu Leu Pro Leu  
485 490 495

Trp Ile Ile Cys Tyr Val Pro Ile Phe Ile Ser Leu Leu Asn Ile Leu  
500 505 510

Pro Ser Pro Lys Ser Phe Pro Phe Leu Val Pro Tyr Leu Leu Phe Glu  
515 520 525

Asn Thr Met Ser Ile Thr Lys Phe Asn Ala Met Ile Ser Gly Leu Phe  
530 535 540

Gln Phe Gly Ser Ala Tyr Glu Trp Val Val Thr Lys Lys Thr Gly Arg  
545 550 555 560

Ser Ser Glu Ser Asp Leu Leu Ala Phe Ala Glu Lys Glu Glu Lys Leu  
565 570 575

His Arg Arg Asn Ser Glu Ser Gly Leu Glu Leu Leu Ser Lys Leu Lys  
580 585 590

Glu Gln Glu Thr Asn Leu Val Gly Gln Glu Thr Val Lys Lys Ser Leu  
595 600 605

Gly Gly Leu Met Arg Pro Lys Asn Lys Lys Lys Thr Asn Met Val Phe  
610 615 620

Lys Lys Glu Leu Gly Leu Ala Phe Leu Leu Leu Thr Ala Ala Ala Arg  
625 630 635 640

Ser Phe Leu Ser Ala His Gly Leu His Phe Tyr Phe Leu Leu Phe Gln  
645 650 655

Gly Leu Ser Phe Leu Val Val Gly Leu Asp Leu Ile Gly Glu Gln Ile  
660 665 670

Ser

&lt;210&gt; 1109

&lt;211&gt; 792

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1109

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gccgcggcta ctggctcaac cgatttgaaa cttgcgaaaa ctgccgtgc taagcgggtc    480
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aagcttgacc taactttaag gctcgaaccg gtgtcacgtg cgtatcatgt ggtacctgtt    720
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&lt;210&gt; 1110

&lt;211&gt; 263

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1110

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Met Arg Met Ser  Cys Asn Gly Cys Arg Val  Leu Arg Lys Gly Cys Ser
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```

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Glu Asp Cys Ser  Ile Arg Pro Cys  Leu Ala Trp  Ile Lys Ser  Pro Glu
20          25          30

```

```

Ala Gln Ala Asn Ala Thr Val Phe Leu Ala Lys Phe Tyr Gly Arg Ala
Page 1721

```

35

40

45

Gly Leu Met Asn Leu Ile Asn Ala Gly Pro Asn His Leu Arg Pro Gly  
 50 55 60  
 Ile Phe Arg Ser Leu Leu His Glu Ala Cys Gly Arg Ile Val Asn Pro  
 65 70 75  
 Ile Tyr Gly Ser Val Gly Leu Leu Trp Ser Gly Asn Trp Gln Leu Cys  
 85 90 95  
 Gln Asp Ala Val Glu Ala Val Met Lys Gly Glu Pro Val Lys Glu Ile  
 100 105 110  
 Ala Thr Asp Ala Ala Thr Ile Gly Gln Gly Pro Pro Leu Lys Ile Tyr  
 115 120 125  
 Asp Ile Arg His Ile Ser Lys Asp Asp Asn Ser Ala Ala Ala Thr  
 130 135 140  
 Gly Ser Thr Asp Leu Lys Leu Ala Lys Thr Arg Arg Ala Lys Arg Val  
 145 150 155 160  
 Ser Thr Val Ala Ile Gln Ala Glu Ser Glu Gly Lys Ser Asp Glu Ala  
 165 170 175  
 Ser His Asp Ser Ser Leu Ser His Gln Ser Glu Ile Val Ala Ala His  
 180 185 190  
 Glu Gly Glu Ser Lys Glu Ser Glu Ser Asn Val Ser Glu Val Leu Ala  
 195 200 205  
 Phe Ser Pro Pro Ala Val Lys Gly Ser Gly Glu Ile Lys Leu Asp Leu  
 210 215 220  
 Thr Leu Arg Leu Glu Pro Val Ser Arg Ala Tyr His Val Val Pro Val  
 225 230 235 240  
 Lys Lys Arg Arg Ile Gly Val Phe Gly Thr Cys Gln Lys Glu Ser Thr  
 245 250 255  
 Cys Lys Thr Glu Leu Met Leu  
 260

&lt;210&gt; 1111

&lt;211&gt; 2019



&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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gcaacggaag aagatggaga gagaatgggt tgttgtgata tttgtgaagt atggcaacac 1920  
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<211> 672

<212> PRT

<213> Arabidopsis thaliana

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20 25 30

Ser Gly His Pro Ala Glu Met Asn Glu Leu Ser Phe Arg Asp Asn Leu  
35 40 45

Ala Lys Leu Leu Glu Phe Gly His Phe Glu Ser Ser Gly Leu Met Gly  
50 55 60

Ser Trp Ser Phe Gln Leu Glu Ile Gln Arg Asn Pro Asn Pro Leu Tyr  
65 70 75 80

Val Leu Leu Phe Val Val Glu Glu Pro Ile Glu Ala Ser Leu Asn Leu  
85 90 95

Arg Cys Asn His Cys Gln Tyr Val Gly Trp Gly Asn Gln Met Ile Cys  
100 105 110

Asn Lys Lys Tyr His Phe Val Ile Pro Ser Lys Glu Thr Met Ala Ala  
115 120 125

Phe Leu Lys Leu Glu Gly Gly Tyr Ala Phe Pro Glu Lys Glu Ser  
130 135 140

Phe Ser His Leu Val Glu Leu Gln Gly His Val Leu His Gly Phe Phe  
145 150 155 160

047-E2F-PCT.ST25.txt

His Ser Asn Gly Phe Gly His Leu Leu Ser Leu Asn Gly Ile Glu Thr  
 165 170 175  
 Gly Ser Asp Leu Thr Gly His Gln Val Met Asp Leu Trp Asp Arg Leu  
 180 185 190  
 Cys Thr Gly Leu Lys Ala Arg Lys Ile Gly Leu Asn Asp Ala Ser His  
 195 200 205  
 Lys Lys Gly Met Glu Leu Arg Leu Leu His Gly Val Ala Lys Gly Glu  
 210 215 220  
 Pro Trp Phe Gly Arg Trp Gly Tyr Arg Phe Gly Ser Gly Thr Tyr Gly  
 225 230 235 240  
 Val Thr Gln Lys Ile Tyr Glu Lys Ala Leu Glu Ser Val Arg Asn Ile  
 245 250 255  
 Pro Leu Cys Leu Leu Asn His His Leu Thr Ser Leu Asn Arg Glu Thr  
 260 265 270  
 Pro Ile Leu Leu Ser Lys Tyr Gln Ser Leu Ser Thr Glu Pro Leu Ile  
 275 280 285  
 Thr Leu Ser Asp Leu Phe Arg Phe Met Leu His Leu His Ser Arg Leu  
 290 295 300  
 Pro Arg Asp Asn Tyr Met Ser Asn Ser Arg Asn Gln Ile Ile Ser Ile  
 305 310 315 320  
 Asp Ser Thr Asn Cys Arg Trp Ser Gln Lys Arg Ile Gln Met Ala Ile  
 325 330 335  
 Lys Val Val Ile Glu Ser Leu Lys Arg Val Glu Tyr Arg Trp Ile Ser  
 340 345 350  
 Arg Gln Glu Val Arg Asp Ala Ala Arg Asn Tyr Ile Gly Asp Thr Gly  
 355 360 365  
 Leu Leu Asp Phe Val Leu Lys Ser Leu Gly Asn Gln Val Val Gly Asn  
 370 375 380  
 Tyr Leu Val Arg Arg Ser Leu Asn Pro Val Lys Lys Val Leu Glu Tyr  
 385 390 395 400  
 Ser Leu Glu Asp Ile Ser Asn Leu Leu Pro Ser Ser Asn Asn Glu Leu  
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Ile Thr Leu Gln Asn Gln Asn Ser Met Gly Lys Met Ala Thr Asn Gly  
420 425 430

His Asn Lys Ile Thr Arg Gly Gln Val Met Lys Asp Met Phe Tyr Phe  
435 440 445

Tyr Lys His Ile Leu Met Asp Tyr Lys Gly Val Leu Gly Pro Ile Gly  
450 455 460

Gly Ile Leu Asn Gln Ile Gly Met Ala Ser Arg Ala Ile Leu Asp Ala  
465 470 475 480

Lys Tyr Phe Ile Lys Glu Tyr His Tyr Ile Arg Asp Thr Ser Ala Lys  
485 490 495

Thr Leu His Leu Asp Arg Gly Glu Glu Leu Gly Ile Phe Cys Thr Ile  
500 505 510

Ala Trp Lys Cys His His His Asn Asn Glu Ile Lys Val Pro Pro Gln  
515 520 525

Glu Cys Ile Val Val Lys Lys Asp Ala Thr Leu Ser Glu Val Tyr Gly  
530 535 540

Glu Ala Glu Arg Val Phe Arg Asp Ile Tyr Trp Glu Leu Arg Asp Val  
545 550 555 560

Val Val Glu Ser Val Val Gly Gly Gln Ile Glu Ile Thr Arg Val Asp  
565 570 575

Glu Met Ala Leu Asn Gly Asn Lys Gly Leu Val Leu Glu Gly Asn Val  
580 585 590

Gly Met Met Met Asn Ile Glu Val Thr Lys Cys Tyr Glu Asp Asp Asp  
595 600 605

Lys Lys Lys Asp Lys Arg Ile Glu Cys Glu Cys Gly Ala Thr Glu Glu  
610 615 620

Asp Gly Glu Arg Met Val Cys Cys Asp Ile Cys Glu Val Trp Gln His  
625 630 635 640

Thr Arg Cys Val Gly Val Gln His Asn Glu Glu Val Pro Arg Ile Phe  
645 650 655

047-E2F-PCT.ST25.txt  
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 <212> DNA  
 <213> Arabidopsis thaliana

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 tcttcagctg ataacccac cactgtcttt gaggatgtca ctctgatcc tattgaaagg 180  
 ggtttgatta gagattggga tgctatggaa gatctgttgc gttatgttgt ctacactggg 240  
 cttggatggg aagagggaaa cgaaggcaat atacttttta cagatccact ttgtactcct 300  
 aaggctatta gggagcaatt ggtgcagttg atgtttgaaa cattcaatgt ctctggattt 360  
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290

295

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Val Glu Leu Leu Arg Lys Trp Phe Ser His Met Gln Glu Leu Lys Pro  
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Gly Ile Tyr Val Thr Tyr Asn Gly Asp Phe Phe Asp Trp Pro Phe Ile  
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Glu Arg Arg Ala Ser His His Gly Ile Lys Met Asn Glu Glu Leu Gly  
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Gly Ser Gln Gly Leu Lys Ala Val Thr Lys Val Lys Leu Gly Tyr Asp  
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Asp Thr Val Arg Ser Phe Arg Asp Arg Arg Tyr Glu Tyr Lys Thr Leu  
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Leu Ile Lys Ile Gln Glu Ala His Asp Met Val Val Val Tyr Asp Ser

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760

765

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 Page 1743

1715

1720

1725

Gln Ala Phe Arg Val Leu Lys Gln Leu Ile Lys Arg Leu Leu His  
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Asp Ala Cys Asn Ser Gly Asn Ile Tyr Ala Asp Ser Ile Leu Gln  
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His Leu Ser Trp Trp Leu Arg Ser Pro Ser Ser Lys Leu His Asp  
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Pro Ala Leu His Leu Met Leu His Lys Val Met Gln Lys Val Phe  
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Tyr Ala Asp Phe Ser Lys Val Ile Ile Asp Thr Gly Lys Phe Asp  
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1820 1825 1830

Gly Ser Arg Asp Ile Phe Lys Leu Ile Leu Leu Glu Pro Val His  
1835 1840 1845

Tyr Trp His Ser Leu Leu Phe Met Asp Gln His Asn Tyr Ala Gly  
1850 1855 1860

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1865 1870 1875

Glu Pro Lys Trp Ser Val Ala Arg His Leu Pro Glu Tyr Ile Gln  
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Lys Asp Phe Ile Ile Ile Val Ala Thr Phe Ile Phe Gly Pro Trp  
1895 1900 1905

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1910 1915 1920

Ala Glu Met Val Glu Tyr Leu Lys Glu Gln Ile Gly Thr Arg Phe  
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1940 1945 1950

Lys Asp Ile Asn Val Ser Asp Ala Ser Trp Ala Ser Gly Gln Ala  
1955 1960 1965

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Glu Ala Glu Phe Ile Asp Pro Gly Pro Ser Phe Ile Leu Pro Asn  
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Arg Asp Ser Ala Leu Leu Thr Glu Lys Glu Trp Ser Cys Ala Asp  
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Ile Ile Gln Met Val Arg Gln Arg Glu Arg Met Tyr Gln Leu Gln  
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Asp Leu Val Cys Asn Arg Cys Asn Gln Val Lys Ala Ala His Leu  
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Thr Glu Gln Cys Glu Cys Ser Gly Ser Phe Arg Cys Lys Glu Ser  
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Gly Ser Asp Phe His Lys Arg Ile Glu Ile Phe Leu Asp Ile Ala  
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<213> Arabidopsis thaliana

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aattattttc aaaaacctga tgatttcaaa cgattgcaac aaagacctaa tcttcactat      240
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Ala Gln Asp Asn Asp Arg Phe Ile Asp Met Met Glu Asn Tyr Phe Glu  
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Lys Pro Asp Asp Phe Lys Arg Leu Gln Gln Arg Pro Asn Leu His Tyr  
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Gln Val Gly Ala Thr Pro Glu Gly Val Glu Val Pro Arg Ser Leu Val  
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Asp Glu Glu Met Gln Glu Lys Phe Asn Thr Met Pro Asn Glu Tyr Lys  
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Pro His Ile Pro Lys Gly Pro Asp His Lys Trp Arg Tyr Met Trp Arg  
115 120 125

Val Gly Pro Arg Pro Ser Asn Thr Arg Phe Lys Glu Leu Asn Ser Glu  
130 135 140

Pro Val Val Pro Glu Gly Phe Pro Gly Trp Glu Glu Val Met Asp Ser  
145 150 155 160

Trp Gly Tyr Lys Met Ile Ser Ala Val Glu Val Val Ala Glu Met Ala  
165 170 175

Ala Ile Gly Phe Gly Leu Pro Lys Asp Ala Phe Thr Ser Leu Met Lys  
180 185 190

Gln Gly Pro His Leu Leu Ala Pro Thr Gly Ser Asp Leu Asn Cys Tyr  
195 200 205

Asn Glu Glu Gly Thr Ile Phe Ala Gly Tyr His Tyr Asp Leu Asn Phe  
210 215 220

Leu Thr Ile His Gly Arg Ser Arg Phe Pro Gly Leu Tyr Ile Trp Leu  
225 230 235 240

Arg Asn Gly Glu Lys Val Ala Val Lys Val Pro Val Gly Cys Leu Leu  
245 250 255

Ile Gln Ala Gly Lys Gln Ile Glu Trp Leu Thr Ala Gly Glu Cys Ile  
260 265 270

Ala Gly Met His Glu Val Val Val Thr Ser Lys Thr Lys Asp Ala Ile  
275 280 285

Thr Leu Ala Lys Glu Gln Asn Arg Ser Leu Trp Arg Val Ser Ser Thr  
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290

295

Leu Phe Ala His Ile Ala Ser Asp Ala Glu Leu Lys Pro Leu Gly His  
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Phe Ala Glu Ser Ser Leu Ala Ser Lys Tyr Pro Ala Ile Pro Ala Gly  
325 330 335

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&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1122

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35 40 45

Thr Val Val Phe Glu Asp Asp Lys Val Leu Ala Phe Arg Asp Ile Thr  
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Pro Gln Gly Pro Val His Ile Leu Leu Ile Pro Lys Val Arg Asp Gly  
65 70 75 80

Leu Thr Gly Leu Ser Lys Ala Glu Glu Arg His Ile Asp Ile Leu Gly  
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Arg Leu Leu Tyr Thr Ala Lys Leu Val Ala Lys Gln Glu Gly Leu Ala  
100 105 110

Glu Gly Phe Arg Ile Val Ile Asn Asp Gly Pro Gln Gly Cys Gln Ser  
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<212> PRT

<213> *Arabidopsis thaliana*

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Arg Ile Trp Arg Asn Pro Gly Asp Gly Asn Tyr Ala Cys Gly Tyr Thr  
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Asn Lys Tyr Phe Val Ser Ala Ser Leu Asp Gly Thr Trp Cys Phe Tyr  
325 330 335

Asp Leu Ser Ser Gly Ser Cys Leu Ala Gln Val Ser Asp Asp Ser Lys  
340 345 350

Asn Val Asp Tyr Thr Ala Ala Ala Phe His Pro Asp Gly Leu Ile Leu  
355 360 365

Gly Thr Gly Thr Ser Gln Ser Val Val Lys Ile Trp Asp Val Lys Ser  
370 375 380

Gln Ala Asn Val Ala Lys Phe Asp Gly His Thr Gly Glu Val Thr Ala  
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Ile Ser Phe Ser Glu Asn Gly Tyr Phe Leu Ala Thr Ala Ala Glu Asp  
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Gly Val Arg Leu Trp Asp Leu Arg Lys Leu Arg Asn Phe Lys Ser Phe  
420 425 430

Leu Ser Ala Asp Ala Asn Ser Val Glu Phe Asp Pro Ser Gly Ser Tyr  
435 440 445

Leu Gly Ile Ala Ala Ser Asp Ile Lys Val Tyr Gln Thr Ala Ser Val  
450 455 460

Lys Ala Glu Trp Asn Leu Ile Lys Thr Leu Pro Asp Leu Ser Gly Thr  
465 470 475 480

Gly Lys Ala Thr Cys Val Lys Phe Gly Ser Asp Ala Gln Tyr Val Ala  
485 490 495

Val Gly Ser Met Asp Arg Asn Tyr Gly Tyr Leu Val Phe Leu Val Met  
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Lys Lys Pro Thr Ser Met Met Thr Leu Arg Lys Thr Arg Glu Gln Ser  
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Val Lys Asn Ser Asp Arg Thr Phe Gln Met Ser Ile Ser Ser Val Ile  
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Ser Leu Lys Phe Leu Lys Phe Cys Cys Ile Leu Gln Tyr Leu Gln Gln  
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Trp Gly Arg Ile Ser  
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<212> DNA

<213> Arabidopsis thaliana

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<212> PRT

<213> Arabidopsis thaliana

<400> 1126

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Pro Ala Gly Tyr Pro Cys Ile Arg Pro Ile His Val Lys Ala Thr Asp  
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Phe Val Phe Ser Gly Leu Gly Thr Pro Gly Asn Thr Thr Asn Ile Ile  
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Asn Ala Ala Val Thr Pro Ala Phe Ala Ala Gln Phe Pro Gly Leu Asn  
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Gly Leu Gly Leu Ser Thr Ala Arg Leu Asp Leu Ala Pro Lys Gly Val  
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Thr Gly Ser Ile Thr Ala Gly Phe Val Ser Ser Ala Asn Ala Val Tyr  
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145 150 155 160

Thr Phe Asn Ser Ala Asn Pro Gly Leu Gln Ile Leu Asp Phe Ala Leu  
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<212> PRT

<213> Arabidopsis thaliana

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Cys	Arg	Val	Val	Ala	Thr	Ser	Arg	Ser	Arg	Ser	Thr	Met	Thr	Asp	Leu
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		50			55						60				

Gln	Asn	Val	Ser	Lys	Val	Leu	Ser	Glu	Val	Ile	Asp	Lys	Phe	Gly	Lys
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 165 170 175  
 Val Ile Asn Val Val Pro Gly Gly Ile Arg Thr Asn Ile Ala Asn Ser  
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 Ala Val Ala Thr Phe Asn Lys Met Pro Glu Leu Lys Leu Tyr Lys Pro  
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 Pro Thr Pro Ala Glu Thr Phe Ala Arg Asp Thr Val Ala Ala Val Leu  
 225 230 235 240  
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<211> 1704

<212> DNA

<213> Arabidopsis thaliana

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<211> 567

<212> PRT

<213> *Arabidopsis thaliana*

<400> 1130

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Leu Thr Gln Leu Glu Leu Asn Ser Leu Ser Val Ala Lys Asp Val Gly  
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Lys Ala Phe Gly Ile Leu Ala Gly Leu Ala Ser Asp Arg Leu Ser Thr  
65 70 75 80  
Pro Val Ile Leu Leu Ile Gly Ser Phe Glu Gly Leu Leu Gly Tyr Gly  
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Val Gln Trp Leu Val Val Ser Arg Thr Ile Gln Pro Ile Pro Tyr Trp  
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115 120 125  
Asn Thr Ala Val Leu Val Thr Cys Ile Arg Asn Phe Arg Arg Asn Arg  
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Gly Pro Val Ser Gly Ile Leu Lys Gly Tyr Val Gly Leu Ser Thr Ala  
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Phe Leu Val Leu Leu Ser Val Val Pro Phe Ala Val Cys Leu Thr Ala  
180 185 190  
Val Phe Phe Leu Arg Glu Ile Pro Pro Ser Thr Thr Phe Ala Glu Asp  
195 200 205  
Asn Glu Glu Ser Lys Tyr Phe Ala Val Phe Asn Ile Val Ala Val Val  
210 215 220  
Val Ala Val Tyr Leu Gln Ser Tyr Asp Ile Ile Gly Ile Lys Thr Gly  
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Ala Phe Ser Ile Ala Phe Ala Ser Ile Leu Leu Ile Leu Leu Ala Ser  
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 Ser Glu Ile Glu val Glu Glu Thr Ile val Gly Ala Ala Ala Ala Ala  
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 Glu Asn His Gly Thr Ile val Thr Thr Glu Lys Lys Arg Pro val Leu  
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Asn Thr Cys Val Gly Ala His Cys Phe Arg Ile Val Phe Ile Val Met  
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Arg Thr Lys Gly Ile Tyr Ala Lys Ile His Ala Ser Lys Lys Thr Lys  
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Lys Ser Gly Gly Asn Leu Arg  
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<211> 1503

<212> DNA

<213> Arabidopsis thaliana

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<211> 500

<212> PRT

<213> Arabidopsis thaliana

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Ala Leu Ser Pro Lys Thr Leu Met Ala Thr Asn Arg Phe Val Cys Glu  
50 55 60

Ile Cys Asn Lys Gly Phe Gln Arg Asp Gln Asn Leu Gln Leu His Arg  
65 70 75 80

Arg Gly His Asn Leu Pro Trp Lys Leu Arg Gln Arg Ser Thr Lys Glu  
85 90 95

Val Arg Lys Lys Val Tyr Val Cys Pro Val Ser Gly Cys Val His His  
100 105 110

Asp Pro Ser Arg Ala Leu Gly Asp Leu Thr Gly Ile Lys Lys His Phe  
115 120 125

Cys Arg Lys His Gly Glu Lys Lys Trp Lys Cys Glu Lys Cys Ser Lys  
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130

135

140

Lys Tyr Ala Val Gln Ser Asp Trp Lys Ala His Ser Lys Ile Cys Gly  
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 Ala Lys Asn His Thr Gln Ser Lys Lys Leu Tyr Pro Glu Thr Val Thr  
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 Arg Lys Asn Pro Glu Ile Glu Gln Lys Ser Pro Ala Ala Val Glu Ser  
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420 425 430

Leu Lys Glu Leu Met Met Gly Asn Ser Ser Val Phe Gly Pro Lys Gln  
435 440 445

Thr Thr Leu Asp Phe Leu Gly Leu Gly Arg Ala Val Gly Asn Gly Gly  
450 455 460

Asn Thr Gly Gly Gly Leu Ser Ala Leu Leu Thr Ser Ile Gly Gly Gly  
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<213> Arabidopsis thaliana

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&lt;210&gt; 1134

&lt;211&gt; 555

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1134

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Gly Ser Lys Val His His Gly Asn Ile Gln Ala Ser Lys Ala Val Ala
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Asp Ile Ile Arg Thr Thr Leu Gly Pro Arg Ser Met Leu Lys Met Leu
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Leu Asp Ala Gly Gly Gly Ile Val Val Thr Asn Asp Gly Asn Ala Ile
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 130 135 140  
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 180 185 190  
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 Glu Asp Ser Glu Val Leu Lys Gly Val Met Phe Asn Lys Asp Val Val  
 210 215 220  
 Ala Pro Gly Lys Met Lys Arg Lys Ile Val Asn Pro Arg Ile Ile Leu  
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 245 250 255  
 Glu Leu Val Arg Glu Glu Asp Trp Glu Val Leu Leu Lys Leu Glu Glu  
 260 265 270  
 Glu Tyr Ile Glu Asn Ile Cys Val Gln Ile Leu Lys Phe Lys Pro Asp  
 275 280 285  
 Leu Val Ile Thr Glu Lys Gly Leu Ser Asp Leu Ala Cys His Tyr Phe  
 290 295 300  
 Ser Lys Ala Gly Val Ser Ala Ile Arg Arg Leu Arg Lys Thr Asp Asn

305                      310                      315                      320  
 Asn Arg Ile Ala Lys Ala Cys Gly Ala Val Ile Val Asn Arg Pro Asp  
                                  325                                   330                                   335  
 Glu Leu Gln Glu Ser Asp Ile Gly Thr Gly Ala Gly Leu Phe Glu Val  
                                  340                                   345                                   350  
 Lys Lys Ile Gly Asp Asp Phe Phe Ser Phe Ile Val Asp Cys Lys Glu  
                                  355                                   360                                   365  
 Pro Lys Ala Cys Thr Val Leu Leu Arg Gly Pro Ser Lys Asp Phe Ile  
                                  370                                   375                                   380  
 Asn Glu Val Glu Arg Asn Leu Gln Asp Ala Met Ser Val Ala Arg Asn  
                                  385                                   390                                   395                                   400  
 Ile Ile Lys Asn Pro Lys Leu Val Pro Gly Gly Gly Ala Thr Glu Leu  
                                  405                                   410                                   415  
 Thr Val Ser Ala Thr Leu Lys Gln Lys Ser Ala Thr Ile Glu Gly Ile  
                                  420                                   425                                   430  
 Glu Lys Trp Pro Tyr Glu Ala Ala Ala Ile Ala Phe Glu Ala Ile Pro  
                                  435                                   440                                   445  
 Arg Thr Leu Ala Gln Asn Cys Gly Val Asn Val Ile Arg Thr Met Thr  
                                  450                                   455                                   460  
 Ala Leu Gln Gly Lys His Ala Asn Gly Glu Asn Ala Trp Thr Gly Ile  
                                  465                                   470                                   475                                   480  
 Asp Gly Asn Thr Gly Ala Ile Ala Asp Met Lys Glu Ser Lys Ile Trp  
                                  485                                   490                                   495  
 Asp Ser Tyr Asn Val Lys Ala Gln Thr Phe Lys Thr Ala Ile Glu Ala  
                                  500                                   505                                   510  
 Ala Cys Met Leu Leu Arg Ile Asp Asp Ile Val Ser Gly Ile Lys Lys  
                                  515                                   520                                   525  
 Lys Gln Ala Pro Gly Ser Gly Pro Ser Lys Pro Thr Ile Glu Thr Glu  
                                  530                                   535                                   540  
 Gly Asp Ala Asp Asn Glu Gln Ile Leu Pro Asp  
                                  545                                   550                                   555

&lt;210&gt; 1135

&lt;211&gt; 2448

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1135

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ctcgtctccc ccggcgccgt cggatggcac tgtcaactca ctatccatgg cgatccaaat      180
tcgagaatct cgtctcttgc gtggtgctgt tctccttcta tagggcttcc ttctggctcg      240
ttattctctc ctgactcaga tggctctatt tctgaatggg atcttttctga tttgaagcag      300
aagattgtgc ttgagtctat tggaaatctc atatggcaaa tggcattggc tccgattagc      360
ggattctcga gtgatgtaga aggtattaa agtgatact tgagttagaa atcgaatgat      420
gaggaagaga ttgggagtga agaagatggt tctgattccg atgagtttca tgagaagtca      480
gaggaggaga tagataggat tcttgcagct gcttgtgatg atggttgtgt gagactgtac      540
cgtatctcta atttagaaaa gttaacttac tatagatcat tgcctagggt cagtggacgt      600
gctttaagtg taacatggag tccagatgca aaaaggatct ttctggggag cagtgatggg      660
ctgataagat gctgggacgc tacctcgtgt catgaggtat acagaattac agctggctct      720
ggtggactag gaagtagttc tgagatctgt gtttggtcac ttctttcgtt gaggtgttca      780
gttcttgtga gtggagatag tacaggaact gtcagtttt gggatagtga gcatggaacc      840
cttttggaag cacactctaa tcacaaaggt gatgtcaata ctcttgcagc agcccccagc      900
cataatcgag tcttttctgc tgggtcggat ggacaggtta tcctttataa gctctctggt      960
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tatgtcaagg ctcatacaca tgacatcaga gctcttacag ttgctgtacc aattagtcca      1080
gaagatcctt ttccggatga tatactgcca gataaagcga gtcgtaaaca tcgcaaaaag      1140
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ttcaataaga cttctcttct actggttcag ggtattagta ctttagatat tcttcgactt      1380
aatataagca gtgattctag tggctgtgcc tcaacaaagt cattgggtcg tgttaaaagt      1440
agagatgccc gaaagatcat atgcagtcca atttctaaca ccgcatcaca ttttgcttac      1500
tctgacaaaa ttggcccccag tctgttcgag ttgaagaaaa atgaatttac aaagtgtcca      1560

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tggagtggtta gtagaaggcg acttcctgaa cttccatttg cacattccat gattttcagt 1620
tcggactgct ctcgtctaataaatagcaggg catgatagaa ggatatatac tattgacata 1680
agtagtttgg aactagtata tgcatttaca ccatctaggg aggagcatga aggtgaagct 1740
ccaacaccta aggagcctcc aataacaaaa ttgtttacta gctcagatgg tcagtggtcta 1800
gtgctatca attgctttgg ggacatctat gtattcaacc tcgaaacaca aaggcagcac 1860
tggttcattt caagactcga tgggtcatct gttaccgctg ctggatttca tccctggaat 1920
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gtttacagtt ccagagcgaa atgtttgatc gacttcggga agcctgtgga agaagatgaa 2160
gagtatgatt taccaaacgg caatttgctt aaaacgctag aaggtaaaact tgtcaacttg 2220
ggcttgaaaa agggaaaggg tacaaaccga aaacgtcggg tagatgagta tcagtttagag 2280
ggtaagagta atgaacgaaa gaacttcgaa atcttacctt caaaccaccc tgttttattc 2340
gtgggtcacc ttcttaaaaa ctcaatcctg gtgatagaga aaccatggat ggatgtgtgc 2400
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&lt;210&gt; 1136

&lt;211&gt; 815

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1136

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Met Leu Glu Tyr Arg Cys Ser Ser Val Asp Trp Lys Pro Ser Pro Val
1      5      10      15

```

```

Val Ala Leu Ala Asn Ser Ser Asp Asp Ser Gln Val Ala Ala Ala Arg
20      25      30

```

```

Glu Asp Gly Ser Leu Glu Ile Trp Leu Val Ser Pro Gly Ala Val Gly
35      40      45

```

```

Trp His Cys Gln Leu Thr Ile His Gly Asp Pro Asn Ser Arg Ile Ser
50      55      60

```

```

Ser Leu Ala Trp Cys Cys Ser Pro Ser Ile Gly Leu Pro Ser Gly Arg
65      70      75      80

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Leu	Phe	Ser	Ser	Ser	Ile	Asp	Gly	Ser	Ile	Pro	Ser	Glu	Trp	Asp	Leu	Phe
				85				90							95	
Asp	Leu	Lys	Gln	Lys	Ile	Val	Leu	Glu	Ser	Ile	Gly	Ile	Ser	Ile	Trp	
			100					105					110			
Gln	Met	Ala	Leu	Ala	Pro	Ile	Ser	Gly	Phe	Ser	Ser	Asp	Val	Glu	Gly	
		115					120					125				
Ile	Lys	Asn	Gly	Tyr	Leu	Ser	Glu	Lys	Ser	Asn	Asp	Glu	Glu	Glu	Ile	
	130					135					140					
Gly	Ser	Glu	Glu	Asp	Gly	Ser	Asp	Ser	Asp	Glu	Phe	His	Glu	Lys	Ser	
145					150					155					160	
Glu	Glu	Glu	Ile	Asp	Arg	Ile	Leu	Ala	Ala	Ala	Cys	Asp	Asp	Gly	Cys	
				165					170					175		
Val	Arg	Leu	Tyr	Arg	Ile	Ser	Asn	Leu	Glu	Lys	Leu	Thr	Tyr	Tyr	Arg	
			180					185					190			
Ser	Leu	Pro	Arg	Val	Ser	Gly	Arg	Ala	Leu	Ser	Val	Thr	Trp	Ser	Pro	
		195					200					205				
Asp	Ala	Lys	Arg	Ile	Phe	Ser	Gly	Ser	Ser	Asp	Gly	Leu	Ile	Arg	Cys	
	210					215					220					
Trp	Asp	Ala	Thr	Ser	Cys	His	Glu	Val	Tyr	Arg	Ile	Thr	Ala	Gly	Leu	
225					230					235					240	
Gly	Gly	Leu	Gly	Ser	Ser	Ser	Glu	Ile	Cys	Val	Trp	Ser	Leu	Leu	Ser	
				245					250					255		
Leu	Arg	Cys	Ser	Val	Leu	Val	Ser	Gly	Asp	Ser	Thr	Gly	Thr	Val	Gln	
			260					265					270			
Phe	Trp	Asp	Ser	Glu	His	Gly	Thr	Leu	Leu	Glu	Ala	His	Ser	Asn	His	
		275					280					285				
Lys	Gly	Asp	Val	Asn	Thr	Leu	Ala	Ala	Ala	Pro	Ser	His	Asn	Arg	Val	
	290					295					300					
Phe	Ser	Ala	Gly	Ala	Asp	Gly	Gln	Val	Ile	Leu	Tyr	Lys	Leu	Ser	Gly	
305					310					315					320	
Ser	Thr	Asn	Gly	Ser	Gln	Asp	Leu	Lys	Pro	Ser	Ser	Ser	Gln	Lys	Trp	
				325					330					335		

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Asp Tyr Ile Gly Tyr Val Lys Ala His Thr His Asp Ile Arg Ala Leu  
 340 345 350  
 Thr Val Ala Val Pro Ile Ser Arg Glu Asp Pro Phe Pro Asp Asp Ile  
 355 360 365  
 Leu Pro Asp Lys Ala Ser Arg Lys His Arg Lys Lys Gly Lys Pro Val  
 370 375 380  
 Asp Phe Thr Tyr His Lys Trp Ala His Leu Gly Val Pro Met Leu Ile  
 385 390 395 400  
 Ser Ala Gly Asp Asp Ala Lys Leu Phe Ala Tyr Ser Ile Gln Glu Phe  
 405 410 415  
 Thr Lys Phe Ser Pro His Asp Ile Cys Pro Ala Pro Gln Arg Ile Pro  
 420 425 430  
 Met Gln Met Val His Asn Ser Met Phe Asn Lys Thr Ser Leu Leu Leu  
 435 440 445  
 Val Gln Gly Ile Ser Thr Leu Asp Ile Leu Arg Leu Asn Ile Ser Ser  
 450 455 460  
 Asp Ser Ser Gly Arg Ala Ser Thr Lys Ser Leu Val Arg Val Lys Ser  
 465 470 475 480  
 Arg Asp Ala Arg Lys Ile Ile Cys Ser Ala Ile Ser Asn Thr Gly Ser  
 485 490 495  
 His Phe Ala Tyr Ser Asp Gln Ile Gly Pro Ser Leu Phe Glu Leu Lys  
 500 505 510  
 Lys Asn Glu Phe Thr Lys Cys Pro Trp Ser Val Ser Arg Arg Arg Leu  
 515 520 525  
 Pro Glu Leu Pro Phe Ala His Ser Met Ile Phe Ser Ser Asp Cys Ser  
 530 535 540  
 Arg Leu Ile Ile Ala Gly His Asp Arg Arg Ile Tyr Thr Ile Asp Ile  
 545 550 555 560  
 Ser Ser Leu Glu Leu Val Tyr Ala Phe Thr Pro Ser Arg Glu Glu His  
 565 570 575  
 Glu Gly Glu Ala Pro Thr Pro Lys Glu Pro Pro Ile Thr Lys Leu Phe  
 580 585 590



Thr Ser Ser Asp Gly Gln Trp Leu Ala Ala Ile Asn Cys Phe Gly Asp  
 595 600 605  
 Ile Tyr Val Phe Asn Leu Glu Thr Gln Arg Gln His Trp Phe Ile Ser  
 610 615 620  
 Arg Leu Asp Gly Ala Ser Val Thr Ala Ala Gly Phe His Pro Trp Asn  
 625 630 635 640  
 Asn Asn Ala Leu Val Ile Ser Thr Ser Ser Asn Gln Val Phe Ala Phe  
 645 650 655  
 Asp Val Glu Ala Arg Gln Leu Gly Lys Trp Ser Leu Leu Asn Thr Tyr  
 660 665 670  
 Val Leu Pro Lys Arg Tyr Gln Glu Phe Pro Gly Glu Val Leu Gly Leu  
 675 680 685  
 Ser Phe Ser Pro Ser Pro Asn Ser Ser Ser Val Ile Val Tyr Ser Ser  
 690 695 700  
 Arg Ala Lys Cys Leu Ile Asp Phe Gly Lys Pro Val Glu Glu Asp Glu  
 705 710 715 720  
 Glu Tyr Asp Leu Pro Asn Gly Asn Leu Ser Lys Thr Leu Glu Gly Lys  
 725 730 735  
 Leu Val Asn Leu Gly Leu Lys Lys Gly Lys Gly Thr Asn Arg Lys Arg  
 740 745 750  
 Arg Leu Asp Glu Tyr Gln Leu Glu Gly Lys Ser Asn Glu Arg Lys Asn  
 755 760 765  
 Phe Glu Ile Leu Pro Ser Asn His Pro Val Leu Phe Val Gly His Leu  
 770 775 780  
 Ser Lys Asn Ser Ile Leu Val Ile Glu Lys Pro Trp Met Asp Val Val  
 785 790 795 800  
 Lys Ser Leu Asp Asn Gln Pro Val Asp Arg His Ile Phe Gly Thr  
 805 810 815

&lt;210&gt; 1137

&lt;211&gt; 1071

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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<400> 1137
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agctcaaaac aatctccacc ctctgtcact cctcctccac cacagccatc gtctcatcac    180
acagctcctc cgccgctgca aatttcgacg gtgacgacta cgactacgac ggccgcgatg    240
gaaggtatct ccggtggact gatgaagaag aagcgtggac ggccaaggaa gtatggaccg    300
gacgggactg ttgtagcgtt atctcctaaa ccgatttcat cagcgccggc gccgtcgcat    360
cttcgccgcg cgagttcaca cgtcacgatc ttctccgctt ctgagaaacg tagcaaagtg    420
aaaccaacga actcgtttta cagaacaaag tatcatcacc aagttgagaa tttgggtgaa    480
tgggctcctt gtcctgctcg tggtaatttc acacctcata taatcacagt caacaccggc    540
gaggatgtaa caatgaagat aatctcgttt tcgcaacaag gacctcgctc tatttgtgtt    600
ctgtcagcaa acggtgttat ttcaagcgtt acacttcgtc agccagattc ctctggcggc    660
acattgacat acgaaggctg gtttgagata ttatcattat ccgggtcatt catgcctaata    720
gattcaggcg gaacacgaag tagaacggga ggaatgagtg tatcgttagc aagtcgccgat    780
ggacgtgtag taggcgggtg cctcgccggg ttactagtag ccgcgagtcg ggttcagggt    840
gttgtaggaa gtttttttag gggcactgac catcaagatc agaaaccgaa aaagaacaaa    900
catgatttca tgttgtcgag tcctaccgct gcaattccta tctctagtgc agctgatcac    960
cggacaatcc attcgggtct gtctcttccg gtcaataata atacatggca gactctttaa    1020
gcttcggatc caagaaacaa gcataccgat attaatgtca atgtaacttg a            1071

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&lt;210&gt; 1138

&lt;211&gt; 356

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1138

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Met Val Leu Asn Met Glu Ser Thr Gly Glu Ala Val Arg Ser Thr Thr
1      5      10
Gly Asn Asp Gly Gly Ile Thr Val Val Arg Ser Asp Ala Pro Ser Asp
20      25      30

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Phe His Val Ala Gln Arg Ser Glu Ser Ser Asn Gln Ser Pro Thr Ser  
 35 40 45  
 Val Thr Pro Pro Pro Pro Gln Pro Ser Ser His His Thr Ala Pro Pro  
 50 55 60  
 Pro Leu Gln Ile Ser Thr Val Thr Thr Thr Thr Thr Thr Ala Ala Met  
 65 70 75 80  
 Glu Gly Ile Ser Gly Gly Leu Met Lys Lys Lys Arg Gly Arg Pro Arg  
 85 90 95  
 Lys Tyr Gly Pro Asp Gly Thr Val Val Ala Leu Ser Pro Lys Pro Ile  
 100 105 110  
 Ser Ser Ala Pro Ala Pro Ser His Leu Pro Pro Pro Ser Ser His Val  
 115 120 125  
 Ile Asp Phe Ser Ala Ser Glu Lys Arg Ser Lys Val Lys Pro Thr Asn  
 130 135 140  
 Ser Phe Asn Arg Thr Lys Tyr His His Gln Val Glu Asn Leu Gly Glu  
 145 150 155 160  
 Trp Ala Pro Cys Ser Val Gly Gly Asn Phe Thr Pro His Ile Ile Thr  
 165 170 175  
 Val Asn Thr Gly Glu Asp Val Thr Met Lys Ile Ile Ser Phe Ser Gln  
 180 185 190  
 Gln Gly Pro Arg Ser Ile Cys Val Leu Ser Ala Asn Gly Val Ile Ser  
 195 200 205  
 Ser Val Thr Leu Arg Gln Pro Asp Ser Ser Gly Gly Thr Leu Thr Tyr  
 210 215 220  
 Glu Gly Arg Phe Glu Ile Leu Ser Leu Ser Gly Ser Phe Met Pro Asn  
 225 230 235 240  
 Asp Ser Gly Gly Thr Arg Ser Arg Thr Gly Gly Met Ser Val Ser Leu  
 245 250 255  
 Ala Ser Pro Asp Gly Arg Val Val Gly Gly Gly Leu Ala Gly Leu Leu  
 260 265 270  
 Val Ala Ala Ser Pro Val Gln Val Val Val Gly Ser Phe Leu Ala Gly  
 275 280 285

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Thr Asp His Gln Asp Gln Lys Pro Lys Lys Asn Lys His Asp Phe Met  
290 295 300

Leu Ser Ser Pro Thr Ala Ala Ile Pro Ile Ser Ser Ala Ala Asp His  
305 310 315 320

Arg Thr Ile His Ser Val Ser Ser Leu Pro Val Asn Asn Asn Thr Trp  
325 330 335

Gln Thr Ser Leu Ala Ser Asp Pro Arg Asn Lys His Thr Asp Ile Asn  
340 345 350

Val Asn Val Thr  
355

<210> 1139

<211> 1587

<212> DNA

<213> Arabidopsis thaliana

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agattaaact tccctgaagg cttcatttgg ggaaccgcaa cagcagcatt tcaggttgaa 180  
ggagctgtta atgaagggtg cagaggtcca agcatgtggg atactttcac taagaagttc 240  
ccacatagat gtgaaaatca taacgctgat gttgctgtgg atttctatca tctgtacaag 300  
gaagatatcc agttgatgaa agaccttaac actgatgctt ttagactttc tattgcgtgg 360  
cccagaatat tccccatgg aaggatgtct aagggaataa gcaaagtggt agtccaattc 420  
taccacgacc tcatcgatga gcttctcaaa aacaataata taccattagt tacagtcttt 480  
cattgggata ctccccaaga ctggaagat gaatatggtg gtttcttaag tggtcgcatc 540  
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cattgcatca catttaacga gccatgggtg tttagtcgtg ccggttacga caacggaaag 660  
aaagctccgg gacgttgttc gccgtacatc cccggttatg gacagcattg tcaggatggg 720  
cggctctggat acgaagctta tcaagtcagt cacaacttac tctgtgcga tgcttacgct 780  
gttgacgcat tcagaaactg caaacagtgt gctggaggtg aaattggaat tgcacacagt 840  
ccagcttggt tcgaaccaca agaccttgag catgttggtg gttccattga acgtgtgctt 900  
gatttcatcc taggatggca tttggctcca acaacttatg gagattatcc acaatcgatg 960

aaggatcgtg tcggtcatag attgccaaaa ttcacagaag ctgagaagaa gttgctaaag 1020  
 ggttctacag attacgtagg aatgaattac tatacttcag tgtttgcaaa agaaattagc 1080  
 cctgaccta agagtccgag ttggacgact gattctcttg ttgattggga tagcaagagt 1140  
 gtggatggat acaaaattgg tagcaagccg tttaatggt aactggatgt gtattcaaaa 1200  
 ggtttgagat accttttgaa gtatattaag gataactatg gcgaccaga agttatcatt 1260  
 gccgagaatg gatacggaga agaccttga gagaagcaca atgacgtaaa ctttgggaca 1320  
 caagatcaca acagaaaata ttatatccaa aggcattctt tgagtatgca cgacgccatt 1380  
 tgcaaggaca aagtgaacgt tacgggatac tttgtgtggt ctttgatgga caactttgag 1440  
 tggcaagatg ggtacaaggc gaggttcgga ctttactaca tcgatttcca gaacaacttg 1500  
 acccgctacc aaaaagtctt gggaatgg tattccgaat tcctcaaacc acagtttcca 1560  
 acctccaagc tgagggaga actctag 1587

<210> 1140

<211> 528

<212> PRT

<213> Arabidopsis thaliana

<400> 1140

Met Val Arg Phe Glu Lys Val His Leu Val Leu Gly Leu Ala Leu Val  
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Leu Thr Leu Val Gly Ala Pro Thr Lys Ala Gln Gly Pro Val Cys Gly  
20 25 30

Ala Gly Leu Pro Asp Lys Phe Ser Arg Leu Asn Phe Pro Glu Gly Phe  
35 40 45

Ile Trp Gly Thr Ala Thr Ala Ala Phe Gln Val Glu Gly Ala Val Asn  
50 55 60

Glu Gly Cys Arg Gly Pro Ser Met Trp Asp Thr Phe Thr Lys Lys Phe  
65 70 75 80

Pro His Arg Cys Glu Asn His Asn Ala Asp Val Ala Val Asp Phe Tyr  
85 90 95

His Arg Tyr Lys Glu Asp Ile Gln Leu Met Lys Asp Leu Asn Thr Asp  
100 105 110

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Ala Phe Arg Leu Ser Ile Ala Trp Pro Arg Ile Phe Pro His Gly Arg  
115 120

Met Ser Lys Gly Ile Ser Lys Val Gly Val Gln Phe Tyr His Asp Leu  
130 135 140

Ile Asp Glu Leu Leu Lys Asn Asn Ile Ile Pro Leu Val Thr Val Phe  
145 150 155 160

His Trp Asp Thr Pro Gln Asp Leu Glu Asp Tyr Gly Gly Phe Leu  
165 170 175

Ser Gly Arg Ile Val Gln Asp Phe Thr Glu Tyr Ala Asn Phe Thr Phe  
180 185 190

His Glu Tyr Gly His Lys Val Lys His Trp Ile Thr Phe Asn Glu Pro  
195 200 205

Trp Val Phe Ser Arg Ala Gly Tyr Asp Asn Gly Lys Lys Ala Pro Gly  
210 215 220

Arg Cys Ser Pro Tyr Ile Pro Gly Tyr Gly Gln His Cys Gln Asp Gly  
225 230 235 240

Arg Ser Gly Tyr Glu Ala Tyr Gln Val Ser His Asn Leu Leu Leu Ser  
245 250 255

His Ala Tyr Ala Val Asp Ala Phe Arg Asn Cys Lys Gln Cys Ala Gly  
260 265 270

Gly Lys Ile Gly Ile Ala His Ser Pro Ala Trp Phe Glu Pro Gln Asp  
275 280 285

Leu Glu His Val Gly Gly Ser Ile Glu Arg Val Leu Asp Phe Ile Leu  
290 295 300

Gly Trp His Leu Ala Pro Thr Thr Tyr Gly Asp Tyr Pro Gln Ser Met  
305 310 315 320

Lys Asp Arg Val Gly His Arg Leu Pro Lys Phe Thr Glu Ala Glu Lys  
325 330 335

Lys Leu Leu Lys Gly Ser Thr Asp Tyr Val Gly Met Asn Tyr Tyr Thr  
340 345 350

Ser Val Phe Ala Lys Glu Ile Ser Pro Asp Pro Lys Ser Pro Ser Trp  
355 360 365

Thr Thr Asp Ser Leu Val Asp Trp Asp Ser Lys Ser Val Asp Gly Tyr  
370 375 380

Lys Ile Gly Ser Lys Pro Phe Asn Gly Lys Leu Asp Val Tyr Ser Lys  
385 390 395 400

Gly Leu Arg Tyr Leu Leu Lys Tyr Ile Lys Asp Asn Tyr Gly Asp Pro  
405 410 415

Glu Val Ile Ile Ala Glu Asn Gly Tyr Gly Glu Asp Leu Gly Glu Lys  
420 425 430

His Asn Asp Val Asn Phe Gly Thr Gln Asp His Asn Arg Lys Tyr Tyr  
435 440 445

Ile Gln Arg His Leu Leu Ser Met His Asp Ala Ile Cys Lys Asp Lys  
450 455 460

Val Asn Val Thr Gly Tyr Phe Val Trp Ser Leu Met Asp Asn Phe Glu  
465 470 475 480

Trp Gln Asp Gly Tyr Lys Ala Arg Phe Gly Leu Tyr Tyr Ile Asp Phe  
485 490 495

Gln Asn Asn Leu Thr Arg His Gln Lys Val Ser Gly Lys Trp Tyr Ser  
500 505 510

Glu Phe Leu Lys Pro Gln Phe Pro Thr Ser Lys Leu Arg Glu Glu Leu  
515 520 525

<210> 1141

<211> 2436

<212> DNA

<213> Arabidopsis thaliana

<400> 1141  
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cctatagcag atgtgttgtg tacctctgat ttgtttttg atgagaaact tggtaaagca 180  
tttgaagaat tgactcagga tgtgatcaa tccattgac tttcaggag ttggcaagct 240  
ttctctagta aagtctattt cgttcttcaa attgaatctt tgctaccaa gatcgggag 300

accattgtgg	atacttttca	gtttctcatg	tcttctaaga	accatctacc	tgatgagcta	360
agcccagctt	ctcttgagca	atgtctagag	aagattaagc	atcttagtta	tgaagaaata	420
tcttctgtca	ttgacgggtc	tttgagggat	cagagagatg	gtgttgacc	tagccctgag	480
atcttgggtg	aaattggaga	gaacactggt	cttagatcaa	accaggagat	tctgattgaa	540
gctgttgctc	tagagaggca	gaaagagatg	gctgagcagt	ctgagaataa	tgcagaagtc	600
gagtctcttg	accaactgat	tgttattgta	aaccgcatgc	atgaacgtct	tcttctgata	660
aaacagactc	agacttctag	tgtcgccatt	cttgccgact	tcttttgccc	tctgtcactt	720
gaagtaatga	ctgatccagt	gatttgtgtc	tcaggacaaa	catatgaaaa	ggcgtttatc	780
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Phe Ser Ser Lys Val Tyr Phe Val Leu Gln Ile Glu Ser Leu Leu Pro  
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Lys Met Arg Asp Thr Ile Val Asp Thr Phe Gln Phe Leu Met Ser Ser  
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Lys Asn His Leu Pro Asp Glu Leu Ser Pro Ala Ser Leu Glu Gln Cys  
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Glu Gly Arg Asn Ala Ile Gly Gln Glu Gly Gly Ile Pro Leu Leu Val  
740 745 750

Glu Val Val Glu Leu Gly Ser Ala Arg Gly Lys Glu Asn Ala Ala Ala  
755 760 765

Ala Leu Leu Gln Leu Ser Thr Asn Ser Gly Arg Phe Cys Asn Met Val  
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Arg Asn Gly Glu Ile Met Glu Ser Asn Val Ser Arg Lys Ser Ser Arg  
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Gly Glu Asp Val Glu Ser Arg Ser Glu Ser Asp Asn Ala Glu Ala Val  
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Ser Gly Asp Asp Leu Asp Thr Ser Asp Arg Pro Leu Lys Lys Lys Lys  
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Arg Tyr His Arg His Thr Pro Lys Gln Ile Gln Asp Leu Glu Ser Val  
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Arg Arg Leu Asn Leu Asp Pro Arg Gln Val Lys Phe Trp Phe Gln Asn  
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 Page 1785

435

440

445

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725 730 735

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755 760 765

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Phe Ala Arg Asp Cys Thr Gln Lys Val Ala Ala Gly Asn Val Arg Ser  
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Ile Ala Arg Asp Cys Ala Thr Lys Arg Gln Pro Ser Arg Gly Cys Tyr  
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Gln Cys Gly Gly Ser Gly His Leu Ala Arg Asp Cys Asp Gln Arg Gly  
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047-E2F-PCT.ST25.txt

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<212> PRT

<213> *Arabidopsis thaliana*

<400> 1148

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 20 25 30

Glu Ile Pro Thr Gly Ala Thr Leu Gly Gly Gly Cys Thr Ala Gly Gln  
 35 40 45

Asp Asp Asp Gly Glu Tyr Glu Pro Val Glu Val Val Arg Ser Ile His  
 50 55 60

Asp Asn Pro Asp Pro Ala Pro Gly Ala Pro Ala Glu Val Pro Glu Pro  
 65 70 75 80

Asp Arg Asp Ala Ser Cys Gly Ala Cys Gly Arg Pro Glu Ser Ile Glu  
 85 90 95

Leu Val Val Val Cys Asp Ala Cys Glu Arg Gly Phe His Met Ser Cys  
 100 105 110

Val Asn Asp Gly Val Glu Ala Ala Pro Ser Ala Asp Trp Met Cys Ser  
 115 120 125

Asp Cys Arg Thr Gly Gly Glu Arg Ser Lys Leu Trp Pro Leu Gly Val  
 130 135 140

Lys Ser Lys Leu Ile Leu Asp Met Asn Ala Ser Pro Pro Ser Asp Ala  
 Page 1793

145                      150                      160

Glu Gly Tyr Gly Ala Glu Glu Thr Ser Asp Ser Arg Lys His Met Leu  
165                      170                      175

Ala Ser Ser Ser Cys Ile Gly Asn Ser Phe Asp Tyr Ala Met Met His  
180                      185                      190

Ser Ser Phe Ser Ser Leu Gly Arg Gly His Ala Ser Leu Glu Ala Ser  
195                      200                      205

Gly Leu Met Ser Arg Asn Thr Lys Met Ser Met Asp Ala Leu Gly Ser  
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His Asn Leu Gly Phe Gly Phe Pro Leu Asn Leu Asn Asn Ser Ser Leu  
225                      230                      235                      240

Pro Met Arg Phe Pro Ser Leu Asp Pro Ser Glu Leu Phe Leu Gln Asn  
245                      250                      255

Leu Arg His Phe Ile Ser Glu Arg His Gly Val Leu Glu Asp Gly Trp  
260                      265                      270

Arg Val Glu Phe Arg Gln Pro Leu Asn Gly Tyr Gln Leu Cys Ala Val  
275                      280                      285

Tyr Cys Ala Pro Asn Gly Lys Thr Phe Ser Ser Ile Gln Glu Val Ala  
290                      295                      300

Cys Tyr Leu Gly Leu Ala Ile Asn Gly Asn Tyr Ser Cys Met Asp Ala  
305                      310                      315                      320

Glu Ile Arg Asn Glu Asn Ser Leu Leu Gln Glu Arg Leu His Thr Pro  
325                      330                      335

Lys Arg Arg Lys Thr Ser Arg Trp Pro Asn Asn Gly Phe Pro Glu Gln  
340                      345                      350

Lys Gly Ser Ser Val Ser Ala Gln Leu Arg Arg Phe Pro Phe Asn Gly  
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Gln Thr Met Ser Pro Phe Ala Val Lys Ser Gly Thr His Phe Gln Ala  
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Gly Gly Ser Leu Ser Ser Gly Asn Asn Gly Cys Gly Cys Glu Glu Ala  
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 Thr Arg Ser Pro Cys Ser Lys Ser Phe Ile Pro Ala Gly Ser Thr Val  
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 485 490 495  
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 515 520 525  
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 545 550 555 560  
 Tyr Asp Gln Asp His Gly Val Glu Ile Gly Asp Ile Val Val Glu Glu  
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 Ala Cys Ser Ile Val Leu Lys Gln Lys Gly Thr Leu Asn Phe Leu Cys  
 595 600 605  
 Lys His Val Asp Arg Glu Thr Ser Glu Ile Asn Trp Asp Thr Met Asn  
 610 615 620  
 Glu Lys Asp Asn Val Ile Leu Ser Leu Ser Lys Phe Cys Cys Ser Leu  
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 Ala Pro Cys Ser Val Thr Cys Gly Glu Lys Asp Lys Ser Glu Phe Ala  
 645 650 655

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 Val 705 Pro Ile Thr Val 710 Ala Glu Gly Ala Leu 715 Val Lys Pro Lys Gly 720  
 Gly Glu Asn Val 725 Lys Asp Glu Val Phe 730 Gly Glu Ile Ser Arg Lys 735 Ala  
 Lys Lys Pro Lys 740 Leu Asn Gly Gly His 745 Gly Val Arg Asn Leu 750 His Pro  
 Pro Pro Gly 755 Arg Pro Met Cys Leu 760 Arg Leu Pro Pro Gly 765 Leu Val Gly  
 Asp Phe 770 Leu Gln Val Ser 775 Glu Val Phe Trp Arg Phe 780 His Glu Ile Leu  
 Gly 785 Phe Glu Glu Ala Phe 790 Ser Pro Glu Asn Leu 795 Glu Gln Glu Leu Ile 800  
 Asn Pro Val Phe 805 Asp Gly Leu Phe Leu Asp 810 Lys Pro Gly Lys Asp 815 Asp  
 Lys Arg Ser Glu 820 Ile Asn Phe Thr Asp 825 Lys Asp Ser Thr Ala 830 Thr Lys  
 Leu Phe 835 Ser Leu Phe Asp Glu Ser Arg Gln Pro Phe 845 Pro Ala Lys Asn  
 Thr Ser 850 Ala Ser Glu Leu Lys 855 Glu Lys Lys Ala Gly 860 Asp Ser Ser Asp  
 Phe Lys 865 Ile Ser Asp Ser 870 Ser Arg Gly Ser Cys 875 Val Gly Ala Leu Leu 880  
 Thr Arg Ala His 885 Ile Ser Leu Leu Gln Val 890 Leu Ile Cys Glu Leu 895 Gln  
 Ser Lys Val 900 Ala Ala Phe Val Asp Pro 905 Asn Phe Asp Ser Gly 910 Glu Ser

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930 935 940

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Glu Ser Ala Glu Ile Ala Ala Arg Glu Ser Gly Lys Val Phe Arg Cys  
965 970 975

Leu Gln Gly Asp Gly Gly Leu Leu Cys Gly Ser Leu Thr Gly Val Ala  
980 985 990

Gly Met Glu Ala Asp Ser Met Leu Leu Ala Glu Ala Ile Lys Lys Ile  
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Ala Leu Glu Arg Asn Pro Pro Glu Trp Ala Lys Lys Ile Leu Glu  
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His Ser Ile Ser Lys Glu Ile Tyr Lys Gly Asn Ala Ser Gly Pro  
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Asp Leu Val Gln Arg Ser Ile Lys Gly Thr Lys Lys Arg Thr Tyr  
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Ile Ser Val Ser Asp Val Ile Met Lys Lys Cys Arg Ala Val Leu  
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Page 1797

1145

1150

1155

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Leu	Ile	Gly	Ser	Lys	Val	Pro	Ser	Pro	Phe	Leu	His	Thr	Val	Asp
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1685						1690					1695			
Thr	Glu	Ile	Ser	Glu	Leu	Val	Gln	Trp	Leu	His	Asp	Asp	Asp	Leu
1700						1705					1710			
Lys	Glu	Arg	Asp	Leu	Arg	Glu	Ser	Ile	Leu	Trp	Trp	Lys	Arg	Leu
1715						1720					1725			
Arg	Tyr	Gly	Asp	Val	Gln	Lys	Glu	Lys	Lys	Gln	Ala	Gln	Asn	Leu
1730						1735					1740			
Ser	Ala	Pro	Val	Phe	Ala	Thr	Gly	Leu	Glu	Thr	Lys	Ala	Ala	Met
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Ser	Met	Glu	Lys	Arg	Tyr	Gly	Pro	Cys	Ile	Lys	Leu	Glu	Met	Glu
1760						1765					1770			
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1775						1780					1785			
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Thr	Glu	Glu	Gly	Lys	Asp	Ile	Ser	Asp	Ser	Ser	Lys	Ala	Lys	Glu
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 Val Lys Glu Ile Gly Leu Ile Ser Ser Asn Gly Ile Pro Thr Phe  
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 1985 1990 1995  
 Lys Asn Lys Lys Ser Ser Gly Ser Gly Leu Lys Ser Cys Cys Val  
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 Val Pro Gln Ala Ala Leu Lys Arg Val Thr Gly Lys Ala Leu Pro  
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 Glu Tyr Leu Lys Asn Glu Trp Trp Tyr Trp Ser Ser Leu Ser Ala  
 Page 1801

2090

2095

2100

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&lt;210&gt; 1150

&lt;211&gt; 237



&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1150

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Val Glu Val Met Cys Gly Cys Thr Ser His Arg Tyr Gly Asp Ala Val  
 35 40 45

Ala Arg Leu Arg Val Phe Pro Thr Gly Asp Leu Glu Ile Thr Cys Glu  
 50 55 60

Cys Thr Pro Gly Cys Asp Glu Asp Lys Leu Thr Pro Ala Ala Phe Glu  
 65 70 75 80

Lys His Ser Gly Arg Glu Thr Ala Arg Lys Trp Lys Asn Asn Val Trp  
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Val Ile Ile Gly Gly Glu Lys Val Pro Leu Ser Lys Thr Val Leu Leu  
 100 105 110

Lys Tyr Tyr Asn Glu Ser Ser Lys Lys Cys Ser Arg Ser Asn Arg Ser  
 115 120 125

Gln Gly Ala Lys Val Cys His Arg Asp Glu Phe Val Gly Cys Asn Asp  
 130 135 140

Cys Gly Lys Glu Arg Arg Phe Arg Leu Arg Ser Arg Asp Glu Cys Arg  
 145 150 155 160

Leu His His Asn Ala Met Gly Asp Pro Asn Trp Lys Cys Ser Asp Phe  
 165 170 175

Pro Tyr Asp Lys Ile Thr Cys Glu Glu Glu Glu Arg Gly Ser Arg  
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Lys Val Tyr Arg Gly Cys Thr Arg Ser Pro Ser Cys Lys Gly Cys Thr  
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Ser Cys Val Cys Phe Gly Cys Glu Leu Cys Arg Phe Ser Glu Cys Thr  
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<210> 1152

<211> 675

<212> PRT

<213> Arabidopsis thaliana

<400> 1152

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Arg	His	Lys	Thr	Glu	Arg	Lys	Glu	Leu	Ser	Ala	Gln	Pro	Asn	Leu	Ser
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115

120

125

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 145 150 155 160  
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 165 170 175  
 Gly Met Glu Pro Ser Gly Ser Leu Val Ser Gln Ile His Val Ala Arg  
 180 185 190  
 Pro Pro Pro Glu Gly Arg Gly Lys Thr Gln Leu Leu Pro Arg Tyr Trp  
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 Pro Arg Ile Thr Asp Gln Glu Leu Leu Gln Leu Ser Gly Gln Tyr Pro  
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 Gly Lys Glu Trp Val Phe Gln Phe Arg Phe Trp Pro Asn Asn Asn Ser  
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Leu Asn Pro Gly Cys Gly Asp Ile Asn Trp Ser Lys Leu Glu Lys Ser  
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Gln Glu Leu Leu Arg Pro Pro Gln Ser Thr Lys Pro Ser Ile Phe Thr  
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Leu Glu Asn Gln Asp Phe Glu Glu Tyr Asp Lys Leu Pro Ser Leu His  
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Asn Glu Thr Phe Val Ser Thr Glu Phe Lys Arg Arg Arg Leu Ala Ser  
465 470 475 480

Ser Asn Glu Lys Leu Asn Gln Ser Gln Asp Ala Ser Ala Leu Asn Ser  
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Leu Gly Asn Ala Gly Ile Thr Thr Thr Gly Glu Gln Gly Glu Ile Thr  
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Val Ala Ala Thr Thr Lys His Pro Arg His Arg Ala Gly Cys Ser Cys  
515 520 525

Ile Val Cys Ser Gln Pro Pro Ser Gly Lys Gly Lys His Lys Pro Ser  
530 535 540

Cys Thr Cys Thr Val Cys Glu Ala Val Lys Arg Phe Arg Thr Leu  
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565 570 575

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580 585 590

Pro Ala Val Glu Leu Ala Ala Gly Glu Asn Ile Asp Leu Asn Ser Asp  
595 600 605

Pro Gly Ala Ser Arg Val Ser Met Met Arg Leu Leu Gln Ala Ala Ala  
610 615 620

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Phe Pro Leu Glu Ala Tyr Leu Lys Gln Lys Ala Ile Ser Asn Thr Ala  
625 630 635

Gly Glu Gln Gln Ser Ser Asp Met Val Ser Thr Glu His Gly Ser Ser  
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<211> 1305

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<213> Arabidopsis thaliana

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<213> Arabidopsis thaliana

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Lys Phe Trp Glu Thr Gln Pro Val Gly Gln Phe Lys Asp Ile Gly Asp  
 50 55 60

Thr Ser Leu Pro Glu Gly Pro Ile Glu Pro Ala Thr Pro Leu Ser Glu  
 65 70 75 80

Val Lys Gln Glu Pro Tyr Asn Leu Pro Ser Val Tyr Glu Trp Thr Thr  
 85 90 95

Cys Asp Met Asn Ser Asp Asp Met Cys Ser Glu Val Tyr Asn Leu Leu  
 100 105 110

Lys Asn Asn Tyr Val Glu Asp Asp Glu Asn Met Phe Arg Phe Asn Tyr  
 115 120 125

Ser Lys Glu Phe Leu Arg Trp Ala Leu Arg Pro Pro Gly Tyr Tyr Gln  
 130 135 140

Ser Trp His Ile Gly Val Arg Ala Lys Thr Ser Lys Lys Leu Val Ala  
 145 150 155 160

Phe Ile Ser Gly Val Pro Ala Arg Ile Arg Val Arg Asp Glu Val Val  
 165 170 175 180 185 190

Lys Met Ala Glu Ile Asn Phe Leu Cys Val His Lys Lys Leu Arg Ser  
 180 185 190  
 Lys Arg Leu Ala Pro Val Met Ile Lys Glu Val Thr Arg Arg Val His  
 195 200 205  
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 Thr Pro Ile Thr Thr Cys Gln Tyr Trp His Arg Ser Leu Asn Pro Lys  
 225 230 235 240  
 Lys Leu Ile Asp Val Gly Phe Ser Arg Leu Gly Ala Arg Met Thr Met  
 245 250 255  
 Ser Arg Thr Ile Lys Leu Tyr Lys Leu Pro Asp Ala Pro Ile Thr Pro  
 260 265 270  
 Gly Phe Arg Lys Met Glu Pro Arg Asp Val Pro Ala Val Thr Arg Leu  
 275 280 285  
 Leu Arg Asn Tyr Leu Ser Gln Phe Gly Val Ala Thr Asp Phe Asp Glu  
 290 295 300  
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 305 310 315 320  
 Tyr Leu Val Glu Ser Pro Glu Thr His Asp Val Thr Asp Phe Cys Ser  
 325 330 335  
 Phe Tyr Thr Leu Pro Ser Thr Ile Leu Gly Asn Pro Asn Tyr Thr Thr  
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 Leu Gln Leu Met Asn Asp Ala Leu Ile Val Ser Lys Gln Lys Gly Phe  
 370 375 380  
 Asp Val Phe Asn Ala Leu Asp Val Met His Asn Glu Ser Phe Leu Lys  
 385 390 395 400  
 Glu Leu Lys Phe Gly Pro Gly Asp Gly Gln Leu His Tyr Tyr Leu Tyr  
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<211> 510

<212> DNA

<213> Arabidopsis thaliana

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<211> 169

<212> PRT

<213> Arabidopsis thaliana

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Arg Arg Ala Ile Thr Ala Lys Ile Tyr Ser Gly Leu Arg Ala Gln Gly  
 35 40 45

Asn Tyr Lys Leu Pro Lys His Cys Asp Asn Asn Glu Val Leu Lys Ala  
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50

55

60

Leu Cys Leu Glu Ala Gly Trp Ile Val Glu Asp Asp Gly Thr Thr Tyr  
65 70 75 80

Arg Lys Gly Phe Ser His Gln His Gln Ile Phe Gln Glu Leu Leu Gln  
85 90 95

Thr Ser Ala Gln Ile His Gln Ser Asn Gln Val His Asn His Gln Leu  
100 105 110

Phe Gln Val Leu His Leu Arg Thr Thr Glu Val Gln Ser His His Pro  
115 120 125

Ser Arg Val His Leu Ala Met Thr Glu Thr Leu Leu His Thr Phe Phe  
130 135 140

Phe Arg Ser Tyr Thr Thr Ser Leu Leu Arg Phe Leu Leu Thr Phe His  
145 150 155 160

Leu Leu Glu Tyr Thr Val Arg Leu  
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&lt;211&gt; 1020

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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<210> 1158

<211> 339

<212> PRT

<213> Arabidopsis thaliana

<400> 1158

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35 40 45

Met Lys Asn Gln Lys Leu Phe Gln Lys Arg Ala Arg Asp Tyr Asn Ser  
50 55 60

Asp Asp Asp Glu Glu Glu Asp Asp Glu Ser Lys Lys Gln Pro Glu Val  
65 70 75 80

Thr Ile Arg Glu Lys Ile Phe Ser Asp Ala Asn Met Gly Pro Asn Tyr  
85 90 95

Glu Glu Ile Gly Glu Glu Asp Asn Asp Glu Asn Ser Asp Gly Glu Asp  
100 105 110

His Gly Glu Ile Glu Ser Gly Ile Thr Lys Phe Ala Thr Asp Gly Cys  
115 120 125

Asn Ala Phe Lys Ile Ala Phe Lys Ala Ile Met Lys Lys Thr Lys Gly  
130 135 140

Asp Asp Thr Leu Gly Pro Val Leu Ser Ala His Lys His Leu Ile Gly  
1813

145 150 160

Glu Lys Leu Ala Glu Asp Glu Ala Glu Lys Lys Ala Lys Gly Gln Ala  
165 170 175

Arg Lys Ala Lys His Leu Ile Ala Glu Lys Gly His Val Lys Pro Gly  
180 185 190

Ser Tyr Leu Asp Ser His Glu Lys Ile Leu Ile Gly Val Ala Thr Lys  
195 200 205

Gly Val Val Lys Leu Phe Asn Ala Val Asn Lys Ala Gln His Ala Gln  
210 215 220

Lys Gly Leu Asn Pro Ser Arg Ser Lys Asp Ala Lys Val Leu Lys Lys  
225 230 235 240

Arg Arg Lys Glu Ala Phe Leu Ser Glu Leu Gly Lys Thr Lys Thr Asp  
245 250 255

Thr Lys Pro Ser Thr Leu Asp Glu His Arg Ser Lys Leu Val Phe Cys  
260 265 270

Leu Glu Leu Ala Ser Ile Glu Lys Gly Ser Pro Ser Val Ala Arg Ala  
275 280 285

Ala His Lys Ser Glu Asp Glu Ala Pro Val Trp Ala Pro Leu Arg Asp  
290 295 300

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<211> 3546

<212> DNA

<213> Arabidopsis thaliana

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&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

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210 215 220Pro Asn Ser Thr Ala Asn His Ile Thr Lys Pro His Ile Thr Pro Ala  
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Pro Leu Pro Pro Val Phe Pro Ser Ser Ile Ile His Ser Glu Ser Met  
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Phe Thr Ser Pro Gly Gln Ser Val Ala Pro His Gly Asn Ala Ser Trp  
515 520 525

Gly His Pro Gln Gly Phe Gln Gln Gln Pro His Pro Gly Gly Leu Arg  
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Pro Pro Ala Gly Pro Lys Gly Lys Pro Pro Arg Pro Val Pro Leu Ser  
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Pro Ser Asp Gly Met Val Gln Pro Thr Gln Pro Lys Arg Lys Met Pro  
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Ser Leu Asn Thr Lys Phe Glu Glu Ala Thr Ala Val Asp Glu Leu Glu  
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Lys Glu Ile Ala Asp Ser Lys Gln Lys Ile Asp Phe Phe Arg Ala Lys  
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Met Gln Glu Leu Val Leu Tyr Lys Ser Arg Cys Asp Asn Arg Tyr Asn  
625 630 635 640

Glu Ile Ala Glu Arg Val Leu Gly Asp Lys Arg Glu Glu Lys Lys Met  
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Lys Pro Thr Ser Leu Val Glu Leu Pro Phe Gly Trp Gln Pro Gly Ile  
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Gln Glu Gly Ala Ala Asp Trp Asp Glu Asp Trp Asp Lys Leu Glu Asp  
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Ser Leu Thr Arg Phe Asp Ser Ile Gly Ser Thr Arg Asp Ser Asp  
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Tyr Ser His Gly Phe Gly Phe Asp Asp His Asp Pro Phe Gly Ser  
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<213> Arabidopsis thaliana

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<213> Arabidopsis thaliana

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Arg Pro Phe Thr Val Phe Arg Trp Arg Pro Gly Arg Asp Ala Arg Tyr  
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Lys Lys Thr Glu Ile Cys Gln Thr Cys Cys Lys Leu Lys Asn Val Cys  
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Gln Val Cys Leu Leu Asp Leu Glu Tyr Gly Leu Pro Val Gln Val Arg  
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Asp Thr Ala Leu Asn Ile Ser Thr His Asp Ser Ile Pro Lys Ser Asp  
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Val Asn Arg Glu Tyr Phe Ala Glu Glu His Asp Arg Lys Ala Arg Ala  
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Ile Leu Lys Leu Gln Arg Thr Thr Pro Tyr Tyr Lys Arg Asn Arg Ala  
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 210 215 220

Glu Ser Ile Lys Thr Leu Tyr Val Gly Gly Leu Asn Ser Arg Ile Leu  
 225 230 235 240

Glu Gln Asp Ile Arg Asp Gln Phe Tyr Ala His Gly Glu Ile Glu Ser  
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&lt;211&gt; 1881

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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<213> Arabidopsis thaliana

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 195 200 205  
 Gly Glu Leu Ser Ile Phe Pro Arg Ser Phe Ile Leu Leu Ser His Cys  
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 225 230 235 240  
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 Lys Asp Gln Glu Ser Arg Tyr Arg Gln Arg His Leu Asp Met Ile Leu  
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 370 375 380  
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405

415

Asp Pro Ile Glu Ile Asp Phe Thr Pro Pro Phe Arg Arg Ile Glu Met  
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Ile Gly Glu Leu Glu Lys Val Ala Lys Leu Asn Ile Pro Lys Asp Leu  
435 440 445

Ala Ser Glu Glu Ala Asn Lys Tyr Leu Ile Asp Ala Cys Ala Arg Phe  
450 455 460

Asp Val Lys Cys Pro Pro Pro Gln Thr Thr Ala Arg Leu Leu Asp Lys  
465 470 475 480

Leu Val Gly Glu Phe Leu Glu Pro Thr Cys Val Asn Pro Thr Phe Ile  
485 490 495

Ile Asn Gln Pro Glu Ile Met Ser Pro Leu Ala Lys Trp His Arg Ser  
500 505 510

Lys Ser Gly Leu Thr Glu Arg Phe Glu Leu Phe Ile Asn Lys His Glu  
515 520 525

Leu Cys Asn Ala Tyr Thr Glu Leu Asn Asp Pro Val Val Gln Arg Gln  
530 535 540

Arg Phe Ala Asp Gln Leu Lys Asp Arg Gln Ser Gly Asp Asp Glu Ala  
545 550 555 560

Met Ala Leu Asp Glu Thr Phe Cys Asn Ala Leu Glu Tyr Gly Leu Ala  
565 570 575

Pro Thr Gly Gly Trp Gly Leu Gly Ile Asp Arg Leu Ser Met Leu Leu  
580 585 590

Thr Asp Ser Leu Asn Ile Lys Glu Val Leu Phe Phe Pro Ala Met Arg  
595 600 605

Pro Pro Gln Glu Glu Ser Ala Ala Ala Gln Ala Pro Leu Thr Glu Glu  
610 615 620

Lys Lys  
625

<210> 1165

<211> 1701

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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attatgggaa ggaagacaga tagcggaaag acagggcctg actctcatga tcaaatgtg   240
atccgccatg ttccattcgc tgataaggta tcgctacggg acatagctag agagagactt   300
gacatagtgc ctgagagaat gcatcgatta ccagaagaat atctcgagga gttaaagaat   360
ggtcttaagg ctatccttga aggaaatggt gcgcagccta tagatgagtt tatgtttctg   420
cagaagtttg tccagacgag atctgattta acttcaaaga cacttgctcg ggctcaccga   480
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atcaatctct ctacgtcatc actcatcgag atctttgtgt acaagagatg cagaacata   600
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aaaatggaga tagtggggtg gaaaaagacg aggatgtaca agaaagcgcg aatggggctt  1260
gaggaatgcg agagagaggt agaagagaaa gcaaagcaag tggcggaact gcagatggag  1320
aggcagaaga agaaacaaca gatagaagag gtggagagga tagtgaggct gaagcaagca  1380
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aggattgtga aagcgaaaaa ggagaaaaca gaagaggaat acgcaagtaa ctatttgaaa  1500
ctgaggctga gcgaggcgga ggagagaaaa gagtatctgt ttgaaaagat aaaagagcag  1560
gaaagtgggt ggaatgggtg tgaagcgtca caagcagtga tgtactcaaa gatcagagaa  1620
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cccttcagat ccaatcctta g

&lt;210&gt; 1166

&lt;211&gt; 566

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1166

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20 25 30Leu Ser Arg Ser Asn Ser Gly Ile Val Arg Glu Ser Pro Ala Glu Ser  
35 40 45Ala Ser Ser Gln Glu Thr Trp Pro Thr Ser Lys Ser Ile Met Gly Arg  
50 55 60Lys Thr Asp Ser Gly Lys Thr Gly Pro Asp Ser His Asp Gln His Val  
65 70 75 80Ile Arg His Val Ser Ile Ala Asp Lys Val Ser Leu Arg Asp Ile Ala  
85 90 95Arg Glu Arg Leu Asp Ile Val Ala Glu Arg Met His Arg Leu Pro Glu  
100 105 110Glu Tyr Leu Glu Glu Leu Lys Asn Gly Leu Lys Ala Ile Leu Glu Gly  
115 120 125Asn Gly Ala Gln Pro Ile Asp Glu Phe Met Phe Leu Gln Lys Phe Val  
130 135 140Gln Thr Arg Ser Asp Leu Thr Ser Lys Thr Leu Val Arg Ala His Arg  
145 150 155 160Val Gln Leu Glu Val Leu Val Val Ile Asn Thr Gly Ile Gln Ala Phe  
165 170 175Leu His Pro Asn Ile Asn Leu Ser Gln Ser Ser Leu Ile Glu Ile Phe  
180 185 190

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Val Tyr Lys Arg Cys Arg Asn Ile Ala Cys Gln Asn Glu Leu Pro Ala  
195 200 205

Asp Gly Cys Pro Cys Glu Ile Cys Ala Asn Arg Lys Gly Phe Cys Asn  
210 215 220

Leu Cys Met Cys Val Ile Cys Asn Lys Phe Asp Phe Ala Val Asn Thr  
225 230 235 240

Cys Arg Trp Ile Gly Cys Asp Val Cys Ser His Trp Thr His Thr Asp  
245 250 255

Cys Ala Ile Arg Asp Gly Glu Ile Ser Met Gly Val Ser Pro Lys Ser  
260 265 270

Val Ser Gly Met Gly Glu Met Leu Phe Lys Cys Arg Ala Cys Asn His  
275 280 285

Thr Ser Glu Leu Leu Gly Trp Val Lys Asp Val Phe Gln His Cys Ala  
290 295 300

Pro Asn Trp Asp Arg Glu Ser Leu Met Lys Glu Leu Asp Phe Val Ser  
305 310 315 320

Arg Ile Phe Arg Gly Ser Glu Asp Thr Arg Gly Arg Lys Leu Phe Trp  
325 330 335

Lys Cys Glu Glu Leu Met Glu Lys Ile Lys Gly Gly Leu Ala Glu Ala  
340 345 350

Thr Ala Ala Lys Leu Ile Leu Met Phe Phe Gln Glu Ile Glu Leu Asp  
355 360 365

Ser Pro Lys Ser Leu Glu Ser Gly Glu Gly Gly Gly Thr Ile Ala Pro  
370 375 380

Gln Asp Ala Cys Asn Arg Ile Ala Glu Val Val Lys Glu Thr Leu Arg  
385 390 395 400

Lys Met Glu Ile Val Gly Glu Glu Lys Thr Arg Met Tyr Lys Lys Ala  
405 410 415

Arg Met Gly Leu Glu Glu Cys Glu Arg Glu Val Glu Glu Lys Ala Lys  
420 425 430

Gln Val Ala Glu Leu Gln Met Glu Arg Gln Lys Lys Lys Gln Gln Ile  
435 440 445

047-E2F-PCT.ST25.txt

Glu Glu Val Glu Arg Ile Val Arg Leu Lys Gln Ala Glu Ala Glu Met  
450 455 460

Phe Gln Leu Lys Ala Asn Glu Ala Lys Val Glu Ala Glu Arg Leu Glu  
465 470 475 480

Arg Ile Val Lys Ala Lys Lys Glu Lys Thr Glu Glu Glu Tyr Ala Ser  
485 490 495

Asn Tyr Leu Lys Leu Arg Leu Ser Glu Ala Glu Ala Glu Lys Glu Tyr  
500 505 510

Leu Phe Glu Lys Ile Lys Glu Gln Glu Ser Gly Gly Asn Gly Gly Glu  
515 520 525

Ala Ser Gln Ala Val Met Tyr Ser Lys Ile Arg Glu Met Leu His Gly  
530 535 540

Tyr Asn Ala Ser Ser Pro Arg Val Asp Pro Arg Ser Asn Gln Arg Asn  
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Pro Phe Arg Ser Asn Pro  
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<211> 1413

<212> DNA

<213> Arabidopsis thaliana

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gttctcatgg ccgccggatc tgaccgggcc ctgtggcaac gaccgcattc gttcggtcgg 240  
tttgggaagt ttggtgggaa gtatgtacct gaaaccctta tgcacgctct atctgagctt 300  
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tacaggcgcg agaattggca agggcctctt atatactga agagagaaga ctggaatcac 480  
acaggagctc acaagattaa caacgctgtg gctcaggctc ttcttgctaa gcggttgggg 540  
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gactttcacg	ctgtgattgg	taaagaaaca	aggaaacaag	cgttggagaa	atggggcggg	900
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atgagtact	tgctgcaaga	tgatgatgga	caaatcattg	aaccacactc	catcagtga	1140
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gaatactata	gcataaccga	cgaagaagcg	ttggaagcgt	tcaagagagt	gtcgcgggta	1260
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cccacattat	cagacgggac	gagagtggtc	ttgaacttca	gcggaagagg	agataaagat	1380
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<210> 1168

<211> 470

<212> PRT

<213> Arabidopsis thaliana

<400> 1168

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			20				25					30			

Ala	Val	Lys	Tyr	Thr	Pro	Leu	Pro	Ser	Ser	Arg	Ser	Lys	Ser	Ser	Ser
		35					40					45			

Phe	Ser	Val	Ser	Cys	Thr	Ile	Ala	Lys	Asp	Pro	Pro	Val	Leu	Met	Ala
	50					55					60				

Ala	Gly	Ser	Asp	Pro	Ala	Leu	Trp	Gln	Arg	Pro	Asp	Ser	Phe	Gly	Arg
65					70					75				80	

Phe	Gly	Lys	Phe	Gly	Gly	Lys	Tyr	Val	Pro	Glu	Thr	Leu	Met	His	Ala

Leu Ser Glu Leu Glu Ser Ala Phe Tyr Ala Leu Ala Thr Asp Asp Asp  
 100 105 110  
 Phe Gln Arg Glu Leu Ala Gly Ile Leu Lys Asp Tyr Val Gly Arg Glu  
 115 120 125  
 Ser Pro Leu Tyr Phe Ala Glu Arg Leu Thr Glu His Tyr Arg Arg Glu  
 130 135 140  
 Asn Gly Glu Gly Pro Leu Ile Tyr Leu Lys Arg Glu Asp Leu Asn His  
 145 150 155 160  
 Thr Gly Ala His Lys Ile Asn Asn Ala Val Ala Gln Ala Leu Leu Ala  
 165 170 175  
 Lys Arg Leu Gly Lys Lys Arg Ile Ile Ala Glu Thr Gly Ala Gly Gln  
 180 185 190  
 His Gly Val Ala Thr Ala Thr Val Cys Ala Arg Phe Gly Leu Glu Cys  
 195 200 205  
 Ile Ile Tyr Met Gly Ala Gln Asp Met Glu Arg Gln Ala Leu Asn Val  
 210 215 220  
 Phe Arg Met Arg Leu Leu Gly Ala Glu Val Arg Gly Val His Ser Gly  
 225 230 235 240  
 Thr Ala Thr Leu Lys Asp Ala Thr Ser Glu Ala Ile Arg Asp Trp Val  
 245 250 255  
 Thr Asn Val Glu Thr Thr His Tyr Ile Leu Gly Ser Val Ala Gly Pro  
 260 265 270  
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 275 280 285  
 Glu Thr Arg Lys Gln Ala Leu Glu Lys Trp Gly Gly Lys Pro Asp Val  
 290 295 300  
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 305 310 315 320  
 Glu Phe Val Asn Asp Thr Glu Val Arg Met Ile Gly Val Glu Ala Ala  
 325 330 335



Gly Phe Gly Leu Asp Ser Gly Lys His Ala Ala Thr Leu Thr Lys Gly  
 340 345 350

Asp Val Gly Val Leu His Gly Ala Met Ser Tyr Leu Leu Gln Asp Asp  
 355 360 365

Asp Gly Gln Ile Ile Glu Pro His Ser Ile Ser Ala Gly Leu Asp Tyr  
 370 375 380

Pro Gly Val Gly Pro Glu His Ser Phe Phe Lys Asp Met Gly Arg Ala  
 385 390 395 400

Glu Tyr Tyr Ser Ile Thr Asp Glu Glu Ala Leu Glu Ala Phe Lys Arg  
 405 410 415

Val Ser Arg Leu Glu Gly Ile Ile Pro Ala Leu Glu Thr Ser His Ala  
 420 425 430

Leu Ala Tyr Leu Glu Lys Leu Cys Pro Thr Leu Ser Asp Gly Thr Arg  
 435 440 445

Val Val Leu Asn Phe Ser Gly Arg Gly Asp Lys Asp Val Gln Thr Val  
 450 455 460

Ala Lys Tyr Leu Asp Val  
 465 470

<210> 1169

<211> 1350

<212> DNA

<213> Arabidopsis thaliana

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 ttgtactggt gttttggatc caagaagaac aataaaagga taggcacgc ggtgcttgta 180  
 cccgaaccag ctgcatcagg agctgcggtg gctccagtcc aaaactcttc gagcaattct 240  
 acttcaatat tcatgacctt tatagctcct cttcatctc ctgcttcctt tctgccatca 300  
 ggtcctccct ctgcgtcaca tactcctgat cctggtctac ttgttcctt aaccgtcaat 360  
 gaaccgctt cagcctttac tattggacca tacgctcatg agactcaacc tgttactcct 420  
 ccagtgttct ctgctttcac aacggaacc tccaccgcgc cattcacgcc acctcctgaa 480

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&lt;210&gt; 1170

&lt;211&gt; 449

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1170

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1      5      10      15

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Ser Ala Ile Val Ser Ala Glu Ser Arg Thr Gln Pro Ser Ser Val Gln
20      25      30

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Lys Lys Arg Gly Ser Trp Trp Ser Leu Tyr Trp Cys Phe Gly Ser Lys
35      40      45

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Lys Asn Asn Lys Arg Ile Gly His Ala Val Leu Val Pro Glu Pro Ala
50      55      60

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Ala Ser Gly Ala Ala Val Ala Pro Val Gln Asn Ser Ser Ser Asn Ser
65      70      75      80

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Thr Ser Ile Phe Met Pro Phe Ile Ala Pro Pro Ser Ser Pro Ala Ser  
 85 90 95  
 Phe Leu Pro Ser Gly Pro Pro Ser Ala Ser His Thr Pro Asp Pro Gly  
 100 105 110  
 Leu Leu Cys Ser Leu Thr Val Asn Glu Pro Pro Ser Ala Phe Thr Ile  
 115 120 125  
 Gly Pro Tyr Ala His Glu Thr Gln Pro Val Thr Pro Pro Val Phe Ser  
 130 135 140  
 Ala Phe Thr Thr Glu Pro Ser Thr Ala Pro Phe Thr Pro Pro Pro Glu  
 145 150 155 160  
 Ser Pro Ser Ser Pro Glu Val Pro Phe Ala Gln Leu Leu Thr Ser Ser  
 165 170 175  
 Leu Glu Arg Ala Arg Arg Asn Ser Gly Gly Gly Met Asn Gln Lys Phe  
 180 185 190  
 Ser Ala Ala His Tyr Glu Phe Lys Ser Cys Gln Val Tyr Pro Gly Ser  
 195 200 205  
 Pro Gly Gly Asn Leu Ile Ser Pro Gly Ser Gly Thr Ser Ser Pro Tyr  
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 Pro Gly Lys Cys Ser Ile Ile Glu Phe Arg Ile Gly Glu Pro Pro Lys  
 225 230 235 240  
 Phe Leu Gly Phe Glu His Phe Thr Ala Arg Lys Trp Gly Ser Arg Phe  
 245 250 255  
 Gly Ser Gly Ser Ile Thr Pro Ala Gly Gln Gly Ser Arg Leu Gly Ser  
 260 265 270  
 Gly Ala Leu Thr Pro Asp Gly Ser Lys Leu Thr Ser Gly Val Val Thr  
 275 280 285  
 Pro Asn Gly Ala Glu Thr Val Ile Arg Met Ser Tyr Gly Asn Leu Thr  
 290 295 300  
 Pro Leu Glu Gly Ser Leu Leu Asp Ser Gln Ile Ser Glu Val Ala Ser  
 305 310 315 320  
 Leu Ala Asn Ser Asp His Gly Ser Ser Arg His Asn Asp Glu Ala Leu  
 325 330 335

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Val Val Pro His Arg Val Ser Phe Glu Leu Thr Gly Glu Asp Val Ala  
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Arg Cys Leu Ala Ser Lys Leu Asn Arg Ser Gly Ser His Glu Lys Ala  
355 360 365

Ser Gly Glu His Leu Arg Pro Asn Cys Cys Lys Thr Ser Gly Glu Thr  
370 375 380

Glu Ser Glu Gln Ser Gln Lys Leu Arg Ser Phe Ser Thr Gly Ser Asn  
385 390 395 400

Lys Glu Phe Lys Phe Asp Ser Thr Asn Glu Glu Met Ile Glu Lys Ile  
405 410 415

Arg Ser Glu Trp Trp Ala Asn Glu Lys Val Ala Gly Lys Gly Asp His  
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Ser Pro Arg Asn Ser Trp Thr Phe Phe Pro Val Leu Arg Ser Gly His  
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Thr

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<211> 1410

<212> DNA

<213> Arabidopsis thaliana

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ggtagtggtcg gtcaagtgaac ggcgcgtaaa gccgcggtg taatccttca gatgattaga 180  
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aaaacgactg atatggaac tgtgtatgat atgggagcta agatgattga ggctttgaac 540  
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<211> 469

<212> PRT

<213> Arabidopsis thaliana

<400> 1172

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			20					25					30		

Leu	Glu	Pro	Arg	Ala	Val	Ser	Glu	Gly	Met	Val	Gly	Gln	Val	Lys	Ala
		35					40					45			

Arg	Lys	Ala	Ala	Gly	Val	Ile	Leu	Gln	Met	Ile	Arg	Glu	Gly	Lys	Ile
	50					55					60				

Ala	Gly	Arg	Ala	Ile	Leu	Ile	Ala	Gly	Gln	Pro	Gly	Thr	Gly	Lys	Thr
65					70					75				80	

Ala	Ile	Ala	Met	Gly	Met	Ala	Lys	Ser	Leu	Gly	Leu	Glu	Thr	Pro	Phe

Ala Met Ile Ala Gly Ser Glu Ile Phe Ser Leu Glu Met Ser Lys Thr  
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Glu Ala Leu Thr Gln Ser Phe Arg Lys Ala Ile Gly Val Arg Ile Lys  
115 120 125

Glu Glu Thr Glu Val Ile Glu Gly Glu Val Val Glu Val Gln Ile Asp  
130 135 140

Arg Pro Ala Ser Ser Gly Val Ala Ser Lys Ser Gly Lys Met Thr Met  
145 150 155 160

Lys Thr Thr Asp Met Glu Thr Val Tyr Asp Met Gly Ala Lys Met Ile  
165 170 175

Glu Ala Leu Asn Lys Glu Lys Val Gln Ser Gly Asp Val Ile Ala Ile  
180 185 190

Asp Lys Ala Thr Gly Lys Ile Thr Lys Leu Gly Arg Ser Phe Ser Arg  
195 200 205

Ser Arg Asp Tyr Asp Ala Met Gly Ala Gln Thr Lys Phe Val Gln Cys  
210 215 220

Pro Glu Gly Glu Leu Gln Lys Arg Lys Glu Val Val His Cys Val Thr  
225 230 235 240

Leu His Glu Ile Asp Val Ile Asn Ser Arg Thr Gln Gly Phe Leu Ala  
245 250 255

Leu Phe Thr Gly Asp Thr Gly Glu Ile Arg Ser Glu Val Arg Glu Gln  
260 265 270

Ile Asp Thr Lys Val Ala Glu Trp Arg Glu Glu Gly Lys Ala Glu Ile  
275 280 285

Val Pro Gly Val Leu Phe Ile Asp Glu Val His Met Leu Asp Ile Glu  
290 295 300

Cys Phe Ser Phe Leu Asn Arg Ala Leu Glu Asn Glu Met Ser Pro Ile  
305 310 315 320

Leu Val Val Ala Thr Asn Arg Gly Val Thr Thr Ile Arg Gly Thr Asn  
325 330 335

Gln Lys Ser Pro His Gly Ile Pro Ile Asp Leu Leu Asp Arg Leu Leu  
 340 345 350

Ile Ile Thr Thr Gln Pro Tyr Thr Asp Asp Asp Ile Arg Lys Ile Leu  
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Glu Ile Arg Cys Gln Glu Glu Asp Val Glu Met Asn Glu Glu Ala Lys  
 370 375 380

Gln Leu Leu Thr Leu Ile Gly Arg Asp Thr Ser Leu Arg Tyr Ala Ile  
 385 390 395 400

His Leu Ile Thr Ala Ala Ala Leu Ser Cys Gln Lys Arg Lys Gly Lys  
 405 410 415

Val Val Glu Val Glu Asp Ile Gln Arg Val Tyr Arg Leu Phe Leu Asp  
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Val Arg Arg Ser Met Gln Tyr Leu Val Glu Tyr Gln Ser Gln Tyr Met  
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<211> 1779

<212> DNA

<213> Arabidopsis thaliana

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ccgcgcgaga agacggcgct tcatgactgt ttggagacta ttgatgagac gctggacgag	420
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&lt;210&gt; 1174

&lt;211&gt; 592

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1174

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Asn Lys Lys Leu Val Leu Leu Ser Ala Ala Val Ala Leu Leu Phe Val
20           25           30

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Ala Ala Val Ala Gly Ile Ser Ala Gly Ala Ser Lys Ala Asn Glu Lys  
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Arg Thr Leu Ser Pro Ser Ser His Ala Val Leu Arg Ser Ser Cys Ser  
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Ser Thr Arg Tyr Pro Glu Leu Cys Ile Ser Ala Val Val Thr Ala Gly  
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Gly Val Glu Leu Thr Ser Gln Lys Asp Val Ile Glu Ala Ser Val Asn  
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Leu Thr Ile Thr Ala Val Glu His Asn Tyr Phe Thr Val Lys Lys Leu  
100 105 110

Ile Lys Lys Arg Lys Gly Leu Thr Pro Arg Glu Lys Thr Ala Leu His  
115 120 125

Asp Cys Leu Glu Thr Ile Asp Glu Thr Leu Asp Glu Leu His Glu Thr  
130 135 140

Val Glu Asp Leu His Leu Tyr Pro Thr Lys Lys Thr Leu Arg Glu His  
145 150 155 160

Ala Gly Asp Leu Lys Thr Leu Ile Ser Ser Ala Ile Thr Asn Gln Glu  
165 170 175

Thr Cys Leu Asp Gly Phe Ser His Asp Asp Ala Asp Lys Gln Val Arg  
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Lys Ala Leu Leu Lys Gly Gln Ile His Val Glu His Met Cys Ser Asn  
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Ala Leu Ala Met Ile Lys Asn Met Thr Asp Thr Asp Ile Ala Asn Phe  
210 215 220

Glu Gln Lys Ala Lys Ile Thr Ser Asn Asn Arg Lys Leu Lys Glu Glu  
225 230 235 240

Asn Gln Glu Thr Thr Val Ala Val Asp Ile Ala Gly Ala Gly Glu Leu  
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Asp Ser Glu Gly Trp Pro Thr Trp Leu Ser Ala Gly Asp Arg Arg Leu  
260 265 270

Leu Gln Gly Ser Gly Val Lys Ala Asp Ala Thr Val Ala Ala Asp Gly

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Arg	Thr	Arg	Thr	Ile	Ile	Thr	Gly	Ser	Arg	Asn	Val	Val	Asp	
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Thr	Thr	Phe	His	Ser	Ala	Thr	Val	Ala	Ala	Val	Gly	Glu	Arg	
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Asp	Met	Leu	Ala	Tyr	Gln	Asp	Thr	Leu	Tyr	Val	His	Ser	Asn	
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			455						460					
Asn	Gln	Asn	Thr	Gly	Ile	Val	Ile	Gln	Lys	Cys	Arg	Ile	Gly	
			470					475					480	
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Pro	Trp	Lys	Glu	Tyr	Ser	Gln	Thr	Val	Ile	Met	Gln	Ser	Ala	
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Asp	Val	Ile	Arg	Pro	Glu	Gly	Trp	Ser	Glu	Trp	Thr	Gly	Thr	
515					520					525				

Phe Ala Leu Asn Thr Leu Thr Tyr Arg Glu Tyr Ser Asn Thr Gly Ala  
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Gly Ala Gly Thr Ala Asn Arg Val Lys Trp Arg Gly Phe Lys Val Ile  
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Thr Ala Ala Ala Glu Ala Gln Lys Tyr Thr Ala Gly Gln Phe Ile Gly  
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<211> 906

<212> DNA

<213> Arabidopsis thaliana

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<210> 1176

<211> 301

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1176

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35 40 45Ala Val Val Gly Leu Gly Ser Ser Gly Arg Ile Phe Leu Gly Val Asn  
50 55 60Val Glu Phe Pro Asn Leu Pro Leu His His Ser Ile His Ala Glu Gln  
65 70 75 80Phe Leu Val Thr Asn Leu Thr Leu Asn Gly Glu Arg His Leu Asn Phe  
85 90 95Phe Ala Val Ser Ala Ala Pro Cys Gly His Cys Arg Gln Phe Leu Gln  
100 105 110Glu Ile Arg Asp Ala Pro Glu Ile Lys Ile Leu Ile Thr Asp Pro Asn  
115 120 125Asn Ser Ala Asp Ser Asp Ser Ala Ala Asp Ser Asp Gly Phe Leu Arg  
130 135 140Leu Gly Ser Phe Leu Pro His Arg Phe Gly Pro Asp Asp Leu Leu Gly  
145 150 155 160Lys Asp His Pro Leu Leu Leu Glu Ser His Asp Asn His Leu Lys Ile  
165 170 175Ser Asp Leu Asp Ser Ile Cys Asn Gly Asn Thr Asp Ser Ser Ala Asp  
180 185 190Leu Lys Gln Thr Ala Leu Ala Ala Ala Asn Arg Ser Tyr Ala Pro Tyr  
195 200 205Ser Leu Cys Pro Ser Gly Val Ser Leu Val Asp Cys Asp Gly Lys Val  
210 215 220

Tyr Arg Gly Trp Tyr Met Glu Ser Ala Ala Tyr Asn Pro Ser Met Gly  
 225 230 235 240

Pro Val Gln Ala Ala Leu Val Asp Tyr Val Ala Asn Gly Gly Gly Gly  
 245 250 255

Gly Tyr Glu Arg Ile Val Gly Ala Val Leu Val Glu Lys Glu Asp Ala  
 260 265 270

Val Val Arg Gln Glu His Thr Ala Arg Leu Leu Leu Glu Thr Ile Ser  
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<210> 1177

<211> 1197

<212> DNA

<213> Arabidopsis thaliana

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<210> 1178

<211> 398

<212> PRT

<213> Arabidopsis thaliana

<400> 1178

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Pro Ser 50 Leu Glu Pro Lys Thr 55 Ala Ser Phe Met His 60 Asn Asp Gly Arg

Ser Val Asn Leu Leu 70 Gln Ala Asp Gly Thr Ile 75 Pro Met Pro Phe His  
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Gly Val Thr Tyr 85 Asn Ile Pro Val Ile Ile Trp Leu Leu Glu Ser Tyr  
 90 95

Pro Arg His 100 Pro Pro Cys Val Tyr Val 105 Asn Pro Thr Ala Asp Met Ile  
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Ile Lys Arg 115 Pro His Ala His Val 120 Thr Pro Ser Gly Leu Val Ser Leu  
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Pro Tyr 130 Leu Gln Asn Trp Val 135 Tyr Pro Ser Ser Asn 140 Leu Val Asp Leu

Val 145 Ser Asp Leu Ser Ala 150 Ala Phe Ala Arg Asp 155 Pro Pro Leu Tyr Ser  
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Arg Arg Arg Pro Gln Pro Pro Pro Pro Ser Pro Pro Thr Val Tyr Asp  
165 170 175

Ser Ser Leu Ser Arg Pro Pro Ser Ala Asp Gln Ser Leu Pro Arg Pro  
180 185 190

Phe Pro Pro Ser Pro Tyr Gly Gly Gly Val Ser Arg Val Gln Val Gln  
195 200 205

His Val His His Gln Gln Gln Ser Asp Asp Ala Ala Glu Val Phe Lys  
210 215 220

Arg Asn Ala Ile Asn Lys Met Val Glu Met Val His Ser Asp Leu Val  
225 230 235 240

Ser Met Arg Arg Ala Arg Glu Ala Glu Ala Glu Glu Leu Leu Ser Leu  
245 250 255

Gln Ala Gly Leu Lys Arg Arg Glu Asp Glu Leu Asn Ile Gly Leu Lys  
260 265 270

Glu Met Val Glu Glu Lys Glu Thr Leu Glu Gln Gln Leu Gln Ile Ile  
275 280 285

Ser Met Asn Thr Asp Ile Leu Asp Ser Trp Val Arg Glu Asn Gln Gly  
290 295 300

Lys Thr Lys Asn Leu Val Asp Leu Asp Val Asp Asn Ala Phe Glu Cys  
305 310 315 320

Gly Asp Thr Leu Ser Lys Gln Met Leu Glu Cys Thr Ala Leu Asp Leu  
325 330 335

Ala Ile Glu Asp Ala Ile Tyr Ser Leu Asp Lys Ser Phe Gln Asp Gly  
340 345 350

Val Val Pro Phe Asp Gln Tyr Leu Arg Asn Val Arg Leu Leu Ser Arg  
355 360 365

Glu Gln Phe Phe His Arg Ala Thr Gly Ser Lys Val Arg Ala Ala Gln  
370 375 380

Met Glu Val Gln Val Ala Ala Ile Ala Gly Arg Leu His Ser  
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<210> 1179

<211> 1344

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1179

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&lt;210&gt; 1180

&lt;211&gt; 447

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*



&lt;400&gt; 1180

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Glu Leu Ser Arg Val Ala Val Ser Asp Thr His Gly Glu Asp Ser Pro
20      25      30

Tyr Phe Ala Gly Trp Lys Ala Tyr Asp Glu Asn Pro Tyr Asp Glu Ser
35      40      45

His Asn Pro Ser Gly Val Ile Gln Met Gly Leu Ala Glu Asn Gln Val
50      55      60

Ser Phe Asp Leu Leu Glu Thr Tyr Leu Glu Lys Lys Asn Pro Glu Gly
65      70      75      80

Ser Met Trp Gly Ser Lys Gly Ala Pro Gly Phe Arg Glu Asn Ala Leu
85      90      95

Phe Gln Asp Tyr His Gly Leu Lys Thr Phe Arg Gln Ala Met Ala Ser
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Phe Met Glu Gln Ile Arg Gly Gly Lys Ala Arg Phe Asp Pro Asp Arg
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Ile Val Leu Thr Ala Gly Ala Thr Ala Ala Asn Glu Leu Leu Thr Phe
130     135     140

Ile Leu Ala Asp Pro Asn Asp Ala Leu Val Pro Thr Pro Tyr Tyr
145     150     155     160

Pro Gly Phe Asp Arg Asp Leu Arg Trp Arg Thr Gly Val Lys Ile Val
165     170     175

Pro Ile His Cys Asp Ser Ser Asn His Phe Gln Ile Thr Pro Glu Ala
180     185     190

Leu Glu Ser Ala Tyr Gln Thr Ala Arg Asp Ala Asn Ile Arg Val Arg
195     200     205

Gly Val Leu Ile Thr Asn Pro Ser Asn Pro Leu Gly Ala Thr Val Gln
210     215     220

Lys Lys Val Leu Glu Asp Leu Leu Asp Phe Cys Val Arg Lys Asn Ile
225     230     235     240

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His Leu Val Ser Asp Glu Ile Tyr Ser Gly Ser Val Phe His Ala Ser  
245 250 255

Glu Phe Thr Ser Val Ala Glu Ile Val Glu Asn Ile Asp Asp Val Ser  
260 265 270

Val Lys Glu Arg Val His Ile Val Tyr Ser Leu Ser Lys Asp Leu Gly  
275 280 285

Leu Pro Gly Phe Arg Val Gly Thr Ile Tyr Ser Tyr Asn Asp Asn Val  
290 295 300

Val Arg Thr Ala Arg Arg Met Ser Ser Phe Thr Leu Val Ser Ser Gln  
305 310 315 320

Thr Gln His Met Leu Ala Ser Met Leu Ser Asp Glu Glu Phe Thr Glu  
325 330 335

Lys Tyr Ile Arg Ile Asn Arg Glu Arg Leu Arg Arg Arg Tyr Asp Thr  
340 345 350

Ile Val Glu Gly Leu Lys Lys Ala Gly Ile Glu Cys Leu Lys Gly Asn  
355 360 365

Ala Gly Leu Phe Cys Trp Met Asn Leu Gly Phe Leu Leu Glu Lys Lys  
370 375 380

Thr Lys Asp Gly Glu Leu Gln Leu Trp Asp Val Ile Leu Lys Glu Leu  
385 390 395 400

Asn Leu Asn Ile Ser Pro Gly Ser Ser Cys His Cys Ser Glu Val Gly  
405 410 415

Trp Phe Arg Val Cys Phe Ala Asn Met Ser Glu Asn Thr Leu Glu Ile  
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<211> 1050

<212> DNA

<213> Arabidopsis thaliana

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ttctttcgag cattcattga cgcaatgatt aggatgggaa atcttagacc ttgactgga    960
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<211> 349

<212> PRT

<213> Arabidopsis thaliana

<400> 1182

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Pro Asp Phe Tyr Phe Gly Thr Cys Pro Phe Val Phe Asp Ile Ile Gly  
35 40 45

Asn Ile Ile Val Asp Glu Leu Gln Thr Asp Pro Arg Ile Ala Ala Ser  
Page 1853

50

55

60

Leu Leu Arg Leu His Phe His Asp Cys Phe Val Arg Gly Cys Asp Ala  
 65 70 75 80  
 Ser Ile Leu Leu Asp Asn Ser Thr Ser Phe Arg Thr Glu Lys Asp Ala  
 85 90 95  
 Ala Pro Asn Ala Asn Ser Ala Arg Gly Phe Asn Val Ile Asp Arg Met  
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&lt;211&gt; 1025

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1184

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Met Asp Pro Thr Leu Arg Lys Gln Ile Gln Glu Cys Asn Trp Gln Val  
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Gln Arg Gly Asn Phe Asn Asp Ile Lys Tyr Val Gly Arg Leu Pro Ser  
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&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1186

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Val Trp Leu Gly Thr Phe Asp Thr Ala Glu Glu Ala Ala Arg Ala Tyr  
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Asp Thr Ala Ala Arg Asp Phe Arg Gly Ala Lys Ala Lys Thr Asn Phe  
65 70 75 80

Pro Thr Phe Leu Glu Leu Ser Asp Gln Lys Val Pro Thr Gly Phe Ala  
85 90 95

Arg Ser Pro Ser Gln Ser Ser Thr Leu Asp Cys Ala Ser Pro Pro Thr  
100 105 110

Leu Val Val Pro Ser Ala Thr Ala Gly Asn Val Pro Pro Gln Leu Glu  
115 120 125

Leu Ser Leu Gly Gly Gly Gly Gly Gly Ser Cys Tyr Gln Ile Pro Met  
130 135 140

Ser Arg Pro Val Tyr Phe Leu Asp Leu Met Gly Ile Gly Asn Val Gly  
145 150 155 160

Arg Gly Gln Pro Pro Pro Val Thr Ser Ala Phe Arg Ser Pro Val Val  
165 170 175

His Val Ala Thr Lys Met Ala Cys Gly Ala Gln Ser Asp Ser Asp Ser  
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Ser Ser Val Val Asp Phe Glu Gly Gly Met Glu Lys Arg Ser Gln Leu  
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<211> 870

<212> DNA

<213> Arabidopsis thaliana

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<211> 289

<212> PRT

<213> *Arabidopsis thaliana*

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Leu Leu Val Val Phe Phe Ile Gly Phe Phe Ala Ile Tyr Phe Cys Lys  
35 40 45

Cys Phe Tyr His Thr Leu Thr Glu Ala Trp Asn His His Tyr His Asn  
50 55 60

Gly Leu Pro Glu Asn Gln Ile Gln Ala Gln Gln Glu Pro Val Gln Pro  
65 70 75 80

Pro Val Asn Pro Gly Leu Glu Pro His Ile Ile Gln Ser Tyr Pro Leu  
85 90 95

Phe Pro Phe Ser Ser Val Lys Asp Leu Arg Glu Asp Lys Tyr Gly Leu  
100 105 110

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Glu Cys Ala Ile Cys Leu Leu Glu Phe Glu Glu Glu His Ile Leu Leu  
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 Arg Leu Leu Thr Thr Cys Tyr His Val Phe His Gln Glu Cys Ile Asp  
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 Gln Trp Leu Glu Ser Asn Lys Thr Cys Pro Val Cys Arg Arg Asn Leu  
 145 150 155 160  
 Asp Pro Asn Ala Pro Glu Asn Ile Lys Glu Leu Ile Ile Glu Val Ile  
 165 170 175  
 Gln Glu Asn Ala His Glu Asn Arg Asp Gln Glu Gln Thr Ser Thr Ser  
 180 185 190  
 Asn Glu Val Met Leu Ser Arg Gln Ser Ser Gly Asn Asn Glu Arg Lys  
 195 200 205  
 Ile Glu Thr Leu Pro Asp Lys Phe Ser Arg Ser Lys Thr Thr Gly His  
 210 215 220  
 Ser Ile Val Arg Asn Lys Pro Glu Glu Glu Asp Arg Tyr Thr Leu Arg  
 225 230 235 240  
 Leu Pro Asp His Val Lys Ile Lys Val Thr Arg Arg His Asn Asn Asn  
 245 250 255  
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Ser

<210> 1191

<211> 1239

<212> DNA

<213> Arabidopsis thaliana

<400> 1191

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&lt;210&gt; 1192

&lt;211&gt; 412

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1192

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Met Ala Gly Ser Ala Pro Glu Gly Thr Gln Phe Asp Ala Arg Gln Phe
1           5           10           15

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Asp Gln Lys Leu Asn Glu Val Leu Glu Gly Gln Asp Glu Phe Phe Thr
20           25           30

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Ser Tyr Asp Asp Val His Glu Ser Phe Asp Ala Met Gly Leu Gln Glu
35           40           45

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Asn Leu Leu Arg Gly Ile Tyr Ala Tyr Gly Phe Glu Lys Pro Ser Ala  
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 Gln Gln Ala Gln Ser Gly Thr Gly Lys Thr Ala Thr Phe Cys Ser Gly  
 85 90 95  
 Val Leu Gln Gln Leu Asp Phe Ser Leu Ile Gln Cys Gln Ala Leu Val  
 100 105 110  
 Leu Ala Pro Thr Arg Glu Leu Ala Gln Gln Ile Glu Lys Val Met Arg  
 115 120 125  
 Ala Leu Gly Asp Tyr Leu Gly Val Lys Val His Ala Cys Val Gly Gly  
 130 135 140  
 Thr Ser Val Arg Glu Asp Gln Arg Ile Leu Gln Ala Gly Val His Val  
 145 150 155 160  
 Val Val Gly Thr Pro Gly Arg Val Phe Asp Met Leu Lys Arg Gln Ser  
 165 170 175  
 Leu Arg Ala Asp Asn Ile Lys Met Phe Val Leu Asp Glu Ala Asp Glu  
 180 185 190  
 Met Leu Ser Arg Gly Phe Lys Asp Gln Ile Tyr Asp Ile Phe Gln Leu  
 195 200 205  
 Leu Pro Pro Lys Ile Gln Val Gly Val Phe Ser Ala Thr Met Pro Pro  
 210 215 220  
 Glu Ala Leu Glu Ile Thr Arg Lys Phe Met Ser Lys Pro Val Arg Ile  
 225 230 235 240  
 Leu Val Lys Arg Asp Glu Leu Thr Leu Glu Gly Ile Lys Gln Phe Tyr  
 245 250 255  
 Val Asn Val Glu Lys Glu Glu Trp Lys Leu Glu Thr Leu Cys Asp Leu  
 260 265 270  
 Tyr Glu Thr Leu Ala Ile Thr Gln Ser Val Ile Phe Val Asn Thr Arg  
 275 280 285  
 Arg Lys Val Asp Trp Leu Thr Asp Lys Met Arg Ser Arg Asp His Thr  
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290

295

300

Val Ser Ala Thr His Gly Asp Met Asp Gln Asn Thr Arg Asp Ile Ile  
305 310 315 320

Met Arg Glu Phe Arg Ser Gly Ser Ser Arg Val Leu Ile Thr Thr Asp  
325 330 335

Leu Leu Ala Arg Gly Ile Asp Val Gln Gln Val Ser Leu Val Ile Asn  
340 345 350

Phe Asp Leu Pro Thr Gln Pro Glu Asn Tyr Leu His Arg Ile Gly Arg  
355 360 365

Ser Gly Arg Phe Gly Arg Lys Gly Val Ala Ile Asn Phe Val Thr Arg  
370 375 380

Asp Asp Glu Arg Met Leu Phe Asp Ile Gln Lys Phe Tyr Asn Val Val  
385 390 395 400

Val Glu Glu Leu Pro Ser Asn Val Ala Asp Leu Leu  
405 410

&lt;210&gt; 1193

&lt;211&gt; 1341

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1193

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gcactttatg cattggaac tttaaagtaag aattgtggcg aaaacgtgta ccagcttatc	240
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gtgaggggaaa agataactaa ttgtttagac acatggcaag aagcctttgg tggacgtgga	360
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gatgctgcta ttcaggcttc gttgcaagga gatgatgctt ctgacctcag cctggaagag	540
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<211> 446

<212> PRT

<213> Arabidopsis thaliana

<400> 1194

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Asn Met Asp Pro Ser Gln Ala Lys Glu Ala Val Lys Val Leu Lys Lys  
35 40 45

Arg Leu Gly Ser Lys Asn Ser Lys Val Gln Ile Leu Ala Leu Tyr Ala  
50 55 60

Leu Glu Thr Leu Ser Lys Asn Cys Gly Glu Asn Val Tyr Gln Leu Ile  
65 70 75 80

Ile Asp Arg Gly Leu Leu Asn Asp Met Val Lys Ile Val Lys Lys Lys  
85 90 95

Pro Glu Leu Asn Val Arg Glu Lys Ile Leu Thr Leu Asp Thr Trp  
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Gln Glu Ala Phe Gly Gly Arg Gly Gly Arg Tyr Pro Gln Tyr Tyr Asn  
 115 120  
 Ala Tyr Asn Asp Leu Arg Ser Ala Gly Ile Glu Phe Pro Pro Arg Thr  
 130 135 140  
 Glu Ser Ser Leu Ser Phe Phe Thr Pro Pro Gln Thr Gln Pro Asp Glu  
 145 150 155 160  
 Asp Ala Ala Ile Gln Ala Ser Leu Gln Gly Asp Asp Ala Ser Ser Leu  
 165 170 175  
 Ser Leu Glu Glu Ile Gln Ser Ala Glu Gly Ser Val Asp Val Leu Met  
 180 185 190  
 Asp Met Leu Gly Ala His Asp Pro Gly Asn Pro Glu Ser Leu Lys Glu  
 195 200 205  
 Glu Val Ile Val Asp Leu Val Glu Gln Cys Arg Thr Tyr Gln Arg Arg  
 210 215 220  
 Val Met Thr Leu Val Asn Thr Thr Thr Asp Glu Glu Leu Leu Cys Gln  
 225 230 235 240  
 Gly Leu Ala Leu Asn Asp Asn Leu Gln His Val Leu Gln Arg His Asp  
 245 250 255  
 Asp Ile Ala Asn Val Gly Ser Val Pro Ser Asn Gly Arg Asn Thr Arg  
 260 265 270  
 Ala Pro Pro Pro Val Gln Ile Val Asp Ile Asn His Asp Asp Glu Asp  
 275 280 285  
 Asp Glu Ser Asp Asp Glu Phe Ala Arg Leu Ala His Arg Ser Ser Thr  
 290 295 300  
 Pro Thr Arg Arg Pro Val His Gly Ser Asp Ser Gly Met Val Asp Ile  
 305 310 315 320  
 Leu Ser Gly Asp Val Tyr Lys Pro Gln Gly Asn Ser Ser Ser Gln Gly  
 325 330 335  
 Val Lys Lys Pro Pro Pro Pro Pro His Thr Ser Ser Ser Ser Ser  
 340 345 350



Ser Pro Val Phe Asp Asp Ala Ser Pro Gln Gln Ser Lys Ser Ser Glu  
 355 360 365

Val Ile Arg Asn Leu Pro Pro Pro Pro Ser Arg His Asn Gln Arg Gln  
 370 375 380

Gln Phe Phe Glu His His His Ser Ser Ser Gly Ser Asp Ser Ser Tyr  
 385 390 395 400

Glu Gly Gln Thr Arg Asn Leu Ser Leu Thr Ser Ser Glu Pro Gln Lys  
 405 410 415

Glu Glu Lys Pro Glu Asp Leu Leu Phe Lys Asp Leu Val Glu Phe Ala  
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<211> 444

<212> DNA

<213> Arabidopsis thaliana

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<211> 147

<212> PRT

<213> Arabidopsis thaliana

<400> 1196

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Asn Gly Asn Arg Lys Thr Ala Gly Tyr Lys Leu Trp Val Leu Ile Ala  
20 25 30

Val Leu Leu Leu Ala Phe Gly Ser Met Leu Thr Gly Ser Val Ser Leu  
35 40 45

Lys Gly Ile Gly Leu Phe His Ser Ala Asp Gly Val Asn Ala Phe Ser  
50 55 60

Phe Gly Asp Asp Leu Asp Val Leu Glu Ile Glu Glu Arg Glu Lys Val  
65 70 75 80

Val Arg Gln Met Trp Asp Val Tyr Gly Arg Ser Gly Gly Val Lys Val  
85 90 95

Pro Arg Phe Trp Arg Glu Ala Phe Glu Ala Ala Tyr Glu Phe Leu Ile  
100 105 110

Ser Asp Ser Ala Ala Val Arg Asn Ala Ala Val Ser Asp Ile Ala Lys  
115 120 125

Leu Ser Leu Val Arg Phe Val Lys Ser Glu Ser Thr Ser Ala Gln Pro  
130 135 140

Asn Leu His  
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<211> 213

<212> DNA

<213> Arabidopsis thaliana

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aaggaaggca aaaggcttca cccgatacca aggaatcatg aaccactaga gccaaagtcac 180  
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<210> 1198

&lt;211&gt; 70

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1198

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 20 25 30

Ser Leu Thr Asn Arg Asn Thr Asp Lys Glu Gly Lys Arg Leu His Pro  
 35 40 45

Ile Pro Arg Asn His Glu Pro Leu Glu Pro Ser His Thr Ile Ala Asp  
 50 55 60

Gly Asp Lys Glu Thr Gly  
 65 70

&lt;210&gt; 1199

&lt;211&gt; 1002

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1199

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gaaatgggtg gtcactttcc atcaaagccg atgtctctct acacaacaat atgggacggt	600
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<210> 1200

<211> 333

<212> PRT

<213> Arabidopsis thaliana

<400> 1200

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 20 25 30

Glu Ser Tyr Thr Gln Leu Phe Gly Asp Lys Asn Leu Phe Val His Gln  
 35 40 45

Asp Gly Lys Ser Val Arg Leu Thr Leu Asp Glu Arg Thr Gly Ser Gly  
 50 55 60

Phe Val Ser Asn Asp Tyr Tyr Leu His Gly Phe Phe Ser Ala Ser Ile  
 65 70 75 80

Lys Leu Pro Ser Asp Tyr Thr Ala Gly Val Val Val Ala Phe Tyr Met  
 85 90 95

Ser Asn Gly Asp Met Tyr Glu Lys Asn His Asp Glu Ile Asp Phe Glu  
 100 105 110

Phe Leu Gly Asn Ile Arg Glu Lys Glu Trp Arg Val Gln Thr Asn Ile  
 115 120 125

Tyr Gly Asn Gly Ser Thr His Ser Gly Arg Glu Glu Arg Tyr Asn Leu  
 130 135 140

Trp Phe Asp Pro Thr Glu Asp Phe His Gln Tyr Ser Ile Leu Trp Ser  
 145 150 155 160

047-E2F-PCT.ST25.txt

Asp Ser His Ile Ile Phe Phe Val Asp Asn Val Pro Ile Arg Glu Val  
165 170 175

Lys Arg Thr Ala Glu Met Gly Gly His Phe Pro Ser Lys Pro Met Ser  
180 185 190

Leu Tyr Thr Thr Ile Trp Asp Gly Ser Lys Trp Ala Thr Asn Gly Gly  
195 200 205

Lys Tyr Gly Val Asn Tyr Lys Tyr Ala Pro Tyr Ile Ala Arg Phe Ser  
210 215 220

Asp Leu Val Leu His Gly Cys Pro Val Asp Pro Ile Glu Gln Phe Pro  
225 230 235 240

Arg Cys Asp Glu Gly Ala Ala Glu Asp Met Arg Ala Ala Gln Glu Ile  
245 250 255

Thr Pro Ser Gln Arg Ser Lys Met Asp Val Phe Arg Arg Arg Leu Met  
260 265 270

Thr Tyr Ser Tyr Cys Tyr Asp Arg Ala Arg Tyr Asn Val Ala Leu Ser  
275 280 285

Glu Cys Val Val Asn Pro Ala Glu Ala Gln Arg Leu Arg Val Tyr Asp  
290 295 300

Pro Val Arg Phe Gly Gly Ile Pro Arg Arg His Arg Asn Gly Lys His  
305 310 315 320

Arg Ser Lys Arg Ser Arg Val Asp Gly Thr Glu Ser Ile  
325 330

<210> 1201

<211> 1752

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 1202

&lt;211&gt; 583

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1202

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Met Glu Pro Asp Leu His Asp Gln Gln Gln Gln Gln Arg Val His Ser
 1      5      10
Val Val Ile Ile Thr Leu Pro Pro Ser Asp Asp Pro Ser Gln Gly Lys
      20      25      30
Thr Ile Ser Ala Phe Thr Leu Thr Asp His Asp Tyr Pro Leu Glu Ile
      35      40      45
Pro Pro Glu Asp Asn Pro Asn Pro Ser Phe Gln Pro Asp Pro Leu His
      50      55      60
Arg Asn Gln Gln Ser Arg Leu Leu Phe Ser Asp Leu Ser Met Asn Ser
 65      70      75      80
Pro Arg Leu Val Leu Gly Leu Leu Gly Ile Ser Leu Leu Ala Val Ala
      85      90      95
Phe Tyr Ala Ser Val Phe Pro Asn Ser Val Gln Met Phe Arg Val Ser
      100      105      110
Pro Asp Glu Arg Asn Arg Asp Asp Asp Asn Leu Arg Glu Thr Ala
      115      120      125
Ser Phe Val Phe Pro Val Tyr His Lys Leu Arg Ala Arg Glu Phe His
      130      135      140
Glu Arg Ile Leu Glu Glu Asp Leu Gly Leu Glu Asn Glu Asn Phe Val
      145      150      155      160
Glu Ser Met Asp Leu Glu Leu Val Asn Pro Val Lys Val Asn Asp Val
      165      170      175
Leu Ser Thr Ser Ala Gly Ser Ile Asp Ser Ser Thr Thr Ile Phe Pro
      180      185      190
Val Gly Gly Asn Val Tyr Pro Asp Gly Leu Tyr Tyr Thr Arg Ile Leu
      195      200      205
Val Gly Lys Pro Glu Asp Gly Gln Tyr Tyr His Leu Asp Ile Asp Thr
      210      215      220
Gly Ser Glu Leu Thr Trp Ile Gln Cys Asp Ala Pro Cys Thr Ser Cys
 225      230      235      240

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Ala Lys Gly Ala Asn Gln Leu Tyr Lys Pro Arg Lys Asp Asn Leu Val  
245 250 255

Arg Ser Ser Glu Ala Phe Cys Val Glu Val Gln Arg Asn Gln Leu Thr  
260 265 270

Glu His Cys Glu Asn Cys His Gln Cys Asp Tyr Glu Ile Glu Tyr Ala  
275 280 285

Asp His Ser Tyr Ser Met Gly Val Leu Thr Lys Asp Lys Phe His Leu  
290 295 300

Lys Leu His Asn Gly Ser Leu Ala Glu Ser Asp Ile Val Phe Gly Cys  
305 310 315 320

Gly Tyr Asp Gln Gln Gly Leu Leu Leu Asn Thr Leu Leu Lys Thr Asp  
325 330 335

Gly Ile Leu Gly Leu Ser Arg Ala Lys Ile Ser Leu Pro Ser Gln Leu  
340 345 350

Ala Ser Arg Gly Ile Ile Ser Asn Val Val Gly His Cys Leu Ala Ser  
355 360 365

Asp Leu Asn Gly Glu Gly Tyr Ile Phe Met Gly Ser Asp Leu Val Pro  
370 375 380

Ser His Gly Met Thr Trp Val Pro Met Leu His Asp Ser Arg Leu Asp  
385 390 395 400

Ala Tyr Gln Met Gln Val Thr Lys Met Ser Tyr Gly Gln Gly Met Leu  
405 410 415

Ser Leu Asp Gly Glu Asn Gly Arg Val Gly Lys Val Leu Phe Asp Thr  
420 425 430

Gly Ser Ser Tyr Thr Tyr Phe Pro Asn Gln Ala Tyr Ser Gln Leu Val  
435 440 445

Thr Ser Leu Gln Glu Val Ser Gly Leu Glu Leu Thr Arg Asp Asp Ser  
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Asp Glu Thr Leu Pro Ile Cys Trp Arg Ala Lys Thr Asn Phe Pro Phe  
465 470 475 480

Ser Ser Leu Ser Asp Val Lys Lys Phe Phe Arg Pro Ile Thr Leu Gln  
485 490 495



Ile Gly Ser Lys Trp Leu Ile Ile Ser Arg Lys Leu Leu Ile Gln Pro  
 500 505 510

Glu Asp Tyr Leu Ile Ile Ser Asn Lys Gly Asn Val Cys Leu Gly Ile  
 515 520 525

Leu Asp Gly Ser Ser Val His Asp Gly Ser Thr Ile Ile Leu Gly Asp  
 530 535 540

Ile Ser Met Arg Gly His Leu Ile Val Tyr Asp Asn Val Lys Arg Arg  
 545 550 555 560

Ile Gly Trp Met Lys Ser Asp Cys Val Arg Pro Arg Glu Ile Asp His  
 565 570 575

Asn Val Pro Phe Phe Gln Gly  
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<210> 1203

<211> 909

<212> DNA

<213> Arabidopsis thaliana

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 aatttgattt caacgtatgg ttgatgaca tcgataccca tcacagcacc accatacgct 180  
 gttagtctgt ttccagttac tccagcaaca agtctttatc ctgagtttcc agtaatgcaa 240  
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 tctgtaatgc ctctctccc accaaagacc atcgaccac cgccttctaa gaccatgtct 660  
 cctccatcat caaaaagcat gttctctcca ccaccagtt ctaagaccat gtctctctca 720  
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<210> 1204

<211> 302

<212> PRT

<213> Arabidopsis thaliana

<400> 1204

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Lys Val Tyr Gly Ala Val Pro Pro Pro Gln Gln Leu Ile Ser Gly Ala  
 20 25 30

Pro Gly Ser Asp Gln Glu Asn Gln Asn Leu Ile Ser Thr Tyr Gly Leu  
 35 40 45

Met Thr Ser Ile Pro Ile Thr Ala Pro Pro Tyr Ala Val Ser Ser Phe  
 50 55 60

Pro Val Thr Pro Ala Thr Ser Leu Tyr Pro Gln Phe Pro Val Met Gln  
 65 70 75 80

Ser Leu Gly Ile Ser Asn Gly Gly Pro Ser Gln Pro Val Ala Gly Gly  
 85 90 95

Thr Ser Tyr Ser Gly Tyr Ala Gly Ile Tyr Pro Gln Ala Thr Pro Leu  
 100 105 110

Gln Gln Val Ala Gln Val Leu Lys Gln Ser Ile Ser Pro Val Ile Ser  
 115 120 125

Thr Val Pro Pro Thr Met Leu Thr Ala Thr Ser Leu Ser Ile Pro Ser  
 130 135 140

Asp Asn Ala Ser Asn Glu Met Glu Arg Arg Pro Pro Arg Lys Arg Lys  
 145 150 155 160

Phe Gln Glu Leu Pro Ala Asp Cys Lys Val Pro Glu Lys Asp Lys Gln  
 165 170 175

Gln Ser Glu Leu Ala Met Thr Gly Asp Val Thr Pro Ser Ala Asn Arg  
 180 185 190

Val Arg Ser Pro Pro Ser Pro Arg Ser Val Met Pro Pro Pro Pro Pro  
 195 200 205

Lys Thr Ile Ala Pro Pro Pro Ser Lys Thr Met Ser Pro Pro Ser Ser  
 210 215 220

Lys Ser Met Leu Pro Pro Pro Pro Arg Ser Lys Thr Met Ser Pro Leu  
 225 230 235 240

Ser Ser Lys Ser Met Leu Pro Pro Pro Pro Arg Phe Thr Leu Thr Thr  
 245 250 255

Gln Arg Ser Arg Leu Gln Asp Asn His Ile Ser Val Lys Lys Pro Asn  
 260 265 270

Pro Val Pro Asp Thr Leu Ile Lys Leu Met Glu Tyr Gly Asp Asp Glu  
 275 280 285

Asp Asp Asp Asp Asp Pro Asp Glu Pro Leu Thr Thr Arg Ser  
 290 295 300

<210> 1205

<211> 417

<212> DNA

<213> Arabidopsis thaliana

<400> 1205

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ctagagtctg gtgatgttaa aggtcaatgg tattacagag cagggtgtgta ttcgagggtc	240
gtcaagactg gggttcctcg gccatattca tctgccaaaa gaggtaaccg ttggttgatc	300
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<210> 1206

<211> 138

<212> PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1206

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20 25 30Glu Ser His Pro Asp Leu Phe Pro Asp Asp Gln Lys Leu Val Ala Glu  
35 40 45Ser Lys Phe Lys Ser Ile Ser Glu Ala Tyr Ser Cys Leu Glu Ser Gly  
50 55 60Asp Val Lys Gly Gln Trp Tyr Tyr Arg Ala Gly Val Tyr Ser Arg Val  
65 70 75 80Val Lys Thr Gly Val Pro Arg Pro Tyr Ser Ser Ala Lys Arg Gly Asn  
85 90 95Arg Trp Leu Ile Gly Ala Pro Phe Leu Leu Ile Val Leu Gly Thr Ile  
100 105 110Gly Leu Gly Gly Ile Lys Ala Asn Arg Ala Tyr Asn Leu Gln Lys Gln  
115 120 125Thr Phe Pro Ser His Asn Pro Phe Leu Pro  
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&lt;210&gt; 1207

&lt;211&gt; 999

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*<400> 1207  
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gctgctttcc ctcttcttaa aggtgttggt gctacaactg atgccgttga gggatgtact 240

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ctcaaggaat ttgcaccatc aatccctgaa aagaacatct cttgtttgac aaggcttgac	480
cacaacaggg ctttgggaca gatctctgag aggttgagcg tgccagtgtc tgatgttaa	540
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<210> 1208

<211> 332

<212> PRT

<213> Arabidopsis thaliana

<400> 1208

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Ile Gly Tyr Ala	Leu Val	Pro Met	Ile Ala	Arg Gly	Ile Met	Leu Gly
20		25			30	

Ala Asp Gln	Pro Val	Ile Leu	His Met	Leu Asp	Ile Pro	Pro Ala	Ala
35		40			45		

Glu Ala Leu	Asn Gly	Val Lys	Met Glu	Leu Ile	Asp Ala	Ala Phe	Pro
50		55			60		

Leu Leu Lys	Gly Val	Val Ala	Thr Thr	Asp Ala	Val Glu	Gly Cys	Thr
65		70		75		80	

Gly Val Asn	Val Ala	Val Met	Val Gly	Gly Phe	Pro Arg	Lys Glu	Gly
	85		90			95	

Met Glu Arg	Lys Asp	Val Met	Ser Lys	Asn Val	Ser Ile	Tyr Lys	Ser
-------------	---------	---------	---------	---------	---------	---------	-----

Gln Ala Ala Ala Leu Glu Lys His Ala Ala Pro Asn Cys Lys Val Leu  
115 120

Val Val Ala Asn Pro Ala Asn Thr Asn Ala Leu Ile Leu Lys Glu Phe  
130 135 140

Ala Pro Ser Ile Pro Glu Lys Asn Ile Ser Cys Leu Thr Arg Leu Asp  
145 150 155 160

His Asn Arg Ala Leu Gly Gln Ile Ser Glu Arg Leu Ser Val Pro Val  
165 170 175

Ser Asp Val Lys Asn Val Ile Ile Trp Gly Asn His Ser Ser Ser Gln  
180 185 190

Tyr Pro Asp Val Asn His Ala Lys Val Gln Thr Ser Ser Gly Glu Lys  
195 200 205

Pro Val Arg Glu Leu Val Lys Asp Asp Ala Trp Leu Asp Gly Glu Phe  
210 215 220

Ile Ser Thr Val Gln Gln Arg Gly Ala Ala Ile Ile Lys Ala Arg Lys  
225 230 235 240

Leu Ser Ser Ala Leu Ser Ala Ala Ser Ser Ala Cys Asp His Ile Arg  
245 250 255

Asp Trp Val Leu Gly Thr Pro Glu Gly Thr Phe Val Ser Met Gly Val  
260 265 270

Tyr Ser Asp Gly Ser Tyr Ser Val Pro Ser Gly Leu Ile Tyr Ser Phe  
275 280 285

Pro Val Thr Cys Arg Asn Gly Asp Trp Ser Ile Val Gln Gly Leu Pro  
290 295 300

Ile Asp Glu Val Ser Arg Lys Lys Met Asp Leu Thr Ala Glu Glu Leu  
305 310 315 320

Lys Glu Glu Lys Asp Leu Ala Tyr Ser Cys Leu Ser  
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<210> 1209

<211> 1731

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1209

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gccatgggaa aaggtgtcac tgaagaacag ttcaaggaga gttggacaag gccgggagct     1680

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1731

<210> 1210

<211> 576

<212> PRT

<213> Arabidopsis thaliana

<400> 1210

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20 25 30

Arg Phe Lys Leu Thr Arg Arg Pro Tyr Thr Ala Arg Asp Val Val Ala  
35 40 45

Leu Arg Gly His Leu Lys Gln Gly Tyr Ala Ser Asn Glu Met Ala Lys  
50 55 60

Lys Leu Trp Arg Thr Leu Lys Ser His Gln Ala Asn Gly Thr Ala Ser  
65 70 75 80

Arg Thr Phe Gly Ala Leu Asp Pro Val Gln Val Thr Met Met Ala Lys  
85 90 95

His Leu Asp Thr Ile Tyr Val Ser Gly Trp Gln Cys Ser Ser Thr His  
100 105 110

Thr Ser Thr Asn Glu Pro Gly Pro Asp Leu Ala Asp Tyr Pro Tyr Asp  
115 120 125

Thr Val Pro Asn Lys Val Glu His Leu Phe Phe Ala Gln Gln Tyr His  
130 135 140

Asp Arg Lys Gln Arg Glu Ala Arg Met Ser Met Ser Arg Glu Glu Arg  
145 150 155 160

Thr Lys Thr Pro Phe Val Asp Tyr Leu Lys Pro Ile Ile Ala Asp Gly  
165 170 175

Asp Thr Gly Phe Gly Gly Thr Thr Ala Thr Val Lys Leu Cys Lys Leu  
180 185 190



Phe Val Glu Arg Gly Ala Ala Gly Val His Ile Glu Asp Gln Ser Ser  
 195 200 205  
 Val Thr Lys Lys Cys Gly His Met Ala Gly Lys Val Leu Val Ala Val  
 210 215 220  
 Ser Glu His Ile Asn Arg Leu Val Ala Ala Arg Leu Gln Phe Asp Val  
 225 230 235 240  
 Met Gly Thr Glu Thr Val Leu Val Ala Arg Thr Asp Ala Val Ala Ala  
 245 250 255  
 Thr Leu Ile Gln Ser Asn Ile Asp Ala Arg Asp His Gln Phe Ile Leu  
 260 265 270  
 Gly Ala Thr Asn Pro Ser Leu Arg Gly Lys Ser Leu Ser Ser Leu Leu  
 275 280 285  
 Ala Glu Gly Met Thr Val Gly Lys Asn Gly Pro Ala Leu Gln Ser Ile  
 290 295 300  
 Glu Asp Gln Trp Leu Gly Ser Ala Gly Leu Met Thr Phe Ser Glu Ala  
 305 310 315 320  
 Val Val Gln Ala Ile Lys Arg Met Asn Leu Asn Glu Asn Glu Lys Asn  
 325 330 335  
 Gln Arg Leu Ser Glu Trp Leu Thr His Ala Arg Tyr Glu Asn Cys Leu  
 340 345 350  
 Ser Asn Glu Gln Gly Arg Val Leu Ala Ala Lys Leu Gly Val Thr Asp  
 355 360 365  
 Leu Phe Trp Asp Trp Asp Leu Pro Arg Thr Arg Glu Gly Phe Tyr Arg  
 370 375 380  
 Phe Gln Gly Ser Val Ala Ala Ala Val Val Arg Gly Trp Ala Phe Ala  
 385 390 395 400  
 Gln Ile Ala Asp Ile Ile Trp Met Glu Thr Ala Ser Pro Asp Leu Asn  
 405 410 415  
 Glu Cys Thr Gln Phe Ala Glu Gly Ile Lys Ser Lys Thr Pro Glu Val  
 420 425 430  
 Met Leu Ala Tyr Asn Leu Ser Pro Ser Phe Asn Trp Asp Ala Ser Gly  
 435 440 445

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Met Thr Asp Gln Gln Met Val Glu Phe Ile Pro Arg Ile Ala Arg Leu  
450 455 460

Gly Tyr Cys Trp Gln Phe Ile Thr Leu Ala Gly Phe His Ala Asp Ala  
465 470 475 480

Leu Val Val Asp Thr Phe Ala Lys Asp Tyr Ala Arg Arg Gly Met Leu  
485 490 495

Ala Tyr Val Glu Arg Ile Gln Arg Glu Glu Arg Thr His Gly Val Asp  
500 505 510

Thr Leu Ala His Gln Lys Trp Ser Gly Ala Asn Tyr Tyr Asp Arg Tyr  
515 520 525

Leu Lys Thr Val Gln Gly Gly Ile Ser Ser Thr Ala Ala Met Gly Lys  
530 535 540

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565 570 575

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<211> 1140

<212> DNA

<213> Arabidopsis thaliana

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gatgactcgg cttttgactg cgaagacgat gatgatgtct tcgtcaatgt taagcctttc 240  
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 ccactagaag tggaagccat gcttgcgca gatgctggtg ctgtgactca ggaagaggaa 1080  
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&lt;210&gt; 1212

&lt;211&gt; 379

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1212

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Lys Ala Ser Lys Lys Arg Ser Asn Lys Arg Ser Asp Phe Phe Asp Leu  
 35 40 45

Asp Asp Asp Phe Glu Ala Asp Phe Gln Gly Phe Lys Asp Asp Ser Ala  
 50 55 60

Phe Asp Cys Glu Asp Asp Asp Val Phe Val Asn Val Lys Pro Phe  
 65 70 75 80

Val Phe Thr Ala Thr Thr Lys Pro Val Ala Ser Ala Phe Val Ser Thr  
 85 90 95

Gly Ile Tyr Leu Val Gly Ser Ala Tyr Ala Lys Lys Thr Val Glu Ser  
 100 105 110

Ala Glu Gln Ala Glu Lys Ser Ser Lys Arg Lys Arg Lys Asn Gln Tyr  
 115 120 125

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Arg Gly Ile Arg Gln Arg Pro Trp Gly Lys Trp Ala Ala Glu Ile Arg  
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145 150 155 160

Glu Glu Ala Ala Arg Ala Tyr Asp Ala Ala Arg Arg Ile Arg Gly  
165 170 175

Thr Lys Ala Lys Val Asn Phe Pro Glu Glu Lys Asn Pro Ser Val Val  
180 185 190

Ser Gln Lys Arg Pro Ser Ala Lys Thr Asn Asn Leu Gln Lys Ser Val  
195 200 205

Ala Lys Pro Asn Lys Ser Val Thr Leu Val Gln Gln Pro Thr His Leu  
210 215 220

Ser Gln Gln Tyr Cys Asn Asn Ser Phe Asp Asn Ser Phe Gly Asp Met  
225 230 235 240

Ser Phe Met Glu Glu Lys Pro Gln Met Tyr Asn Asn Gln Phe Gly Leu  
245 250 255

Thr Asn Ser Phe Asp Ala Gly Gly Asn Asn Gly Tyr Gln Tyr Phe Ser  
260 265 270

Ser Asp Gln Gly Ser Asn Ser Phe Asp Cys Ser Glu Phe Gly Trp Ser  
275 280 285

Asp His Gly Pro Lys Thr Pro Glu Ile Ser Ser Met Leu Val Asn Asn  
290 295 300

Asn Glu Ala Ser Phe Val Glu Glu Thr Asn Ala Ala Lys Lys Leu Lys  
305 310 315 320

Pro Asn Ser Asp Glu Ser Asp Asp Leu Met Ala Tyr Leu Asp Asn Ala  
325 330 335

Leu Trp Asp Thr Pro Leu Glu Val Glu Ala Met Leu Gly Ala Asp Ala  
340 345 350

Gly Ala Val Thr Gln Glu Glu Glu Asn Pro Val Glu Leu Trp Ser Leu  
355 360 365

Asp Glu Ile Asn Phe Met Leu Glu Gly Asp Phe  
370 375

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 <211> 312  
 <212> DNA  
 <213> *Arabidopsis thaliana*

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 35 40 45  
 Gly Leu Ile Tyr Glu Glu Thr Arg Gly Val Leu Lys Ile Phe Leu Glu  
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 Asn Val Ile Arg Asp Ala Val Thr Tyr Thr Glu His Ala Arg Arg Lys  
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 <213> *Arabidopsis thaliana*

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Ser	Gly	Gln	Ser	Cys	Lys	Ile	Gly	Asn	Gln	Ile	Cys	Val	Gly	Ser	Asn
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			245						250					255	
Glu	Ala	Ala	Met	Ala	Met	Pro	Gly	Thr	Ala	Leu	Asn	Lys	Gln	Leu	Phe
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Thr	Val	Met	Val	Ala	Asn	Gly	Asp	Gly	Lys	Leu	Gly	Phe	Gln	Gly	Val
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<211> 3012

<212> DNA

<213> Arabidopsis thaliana

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<211> 1003

<212> PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1218

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210 215 220

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 260 265 270  
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 275 280 285  
 Lys His Val Asp Thr Gly Met Gly Phe Glu Arg Leu Thr Ser Val Leu  
 290 295 300  
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 305 310 315 320  
 Asp Asp Ile Gln Lys Ala Thr Gly Ala Arg Pro Tyr Ser Gly Lys Val  
 325 330 335  
 Gly Pro Glu Asp Val Asp Arg Val Asp Met Ala Tyr Arg Val Val Ala  
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 385 390 395 400  
 Gly Leu Val Ser Ser Val Ile Arg Val Met Gly Asp Val Phe Thr Glu  
 405 410 415  
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 420 425 430  
 Ala Ser Phe Cys Lys Thr Leu Ala Lys Gly Ile Glu Lys Phe Arg Lys  
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Ala Gly Val Ser Ala Thr Asp Asp Ser Phe Lys Tyr Ile Trp Phe Gln  
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Asp His Glu Ser Glu Leu Lys Ala Ile Tyr Thr Gly Ser Thr Phe Leu  
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Glu Ser Ser Ala Ala Ser Asp Asn Val Gly Leu Val Leu Gly Ser Thr  
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Ser Phe Tyr Ala Glu Gln Gly Gly Gln Ile Phe Asp Thr Gly Leu Ile  
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Glu Gly Ser Phe Gly Thr Phe Asn Val Cys Asn Val Gln Ile Phe Gly  
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Gly Phe Val Leu His Ile Gly Tyr Leu Ser Lys Glu Thr Gly Glu Val  
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Ser Val Gly Asp Lys Val Ile Cys Lys Val Asp Tyr Glu Arg Arg Lys  
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Leu Ile Ala Pro Asn His Thr Cys Thr His Met Leu Asn Tyr Ala Leu  
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Lys Glu Val Leu Gly Asp His Ile Asp Gln Lys Gly Ser Ile Val Leu  
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Pro Glu Lys Leu Arg Phe Asp Phe Ser His Gly Lys Pro Val Asp Pro  
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Glu Asp Leu Arg Arg Ile Glu Ser Ile Val Asn Lys Gln Ile Lys Asp  
690 695 700

Glu Leu Asp Val Phe Ser Lys Glu Ala Val Leu Ser Glu Ala Lys Arg  
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Ile Lys Gly Leu Arg Ala Val Phe Gly Glu Val Tyr Pro Asp Pro Val  
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Arg Val Val Ser Ile Gly Arg Lys Val Glu Asp Leu Leu Ala Asp Pro  
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 785 790 795 800  
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<211> 2106

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<212> PRT

<213> Arabidopsis thaliana

<400> 1220

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 35 40 45

Lys Ala Val Glu Pro Ser Trp Pro Lys Leu Val Glu Pro Leu Glu Lys  
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Ile Ile Asp Arg Leu Ser Val Val Trp Gly Met Ile Asn His Leu Lys  
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Ala Val Lys Asp Thr Pro Glu Leu Arg Ala Ala Ile Glu Glu Val Gln  
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Glu Asp Leu Lys Ser<sub>325</sub> Phe Ala Lys Asn Gln<sub>330</sub> Gly Ala Ala Glu Ala<sub>335</sub> Asp  
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385 390 395 400

Val Arg Phe Tyr Cys Val Lys Asp Ser Ser Gly Asn Pro Thr Ala Tyr  
405 410 415

Phe Tyr Phe Asp Pro Tyr Ser Arg Pro Ser Glu Lys Arg Asp Gly Ala  
420 425 430

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<213> Arabidopsis thaliana

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&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

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Thr Ala Val Phe Val Leu Ser Thr Leu Gln Gln Ile Glu Pro Ser Pro  
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Val Leu Ala Leu Ala Arg Glu Lys Asp Leu Ser Leu Lys Asn Val Arg  
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Leu Gly Leu Lys Thr Thr Cys Ile Glu Lys Arg Gly Ala Leu Gly Gly
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Thr Cys Leu Asn Val Gly Cys Ile Pro Ser Lys Ala Leu Leu His Ser
      85      90      95
Ser His Met Tyr His Glu Ala Lys His Val Phe Ala Asn His Gly Val
      100      105      110
Lys Val Ser Ser Val Glu Val Asp Leu Pro Ala Met Leu Ala Gln Lys
      115      120      125
Asp Thr Ala Val Lys Asn Leu Thr Arg Gly Val Glu Gly Leu Phe Lys
      130      135      140
Lys Asn Lys Val Asn Tyr Val Lys Gly Tyr Gly Lys Phe Leu Ser Pro
      145      150      155      160
Ser Glu Val Ser Val Asp Thr Ile Asp Gly Glu Asn Val Val Val Lys
      165      170      175
Gly Lys His Ile Ile Val Ala Thr Gly Ser Asp Val Lys Ser Leu Pro
      180      185      190
Gly Ile Thr Ile Asp Glu Lys Lys Ile Val Ser Ser Thr Gly Ala Leu
      195      200      205
Ser Leu Thr Glu Ile Pro Lys Lys Leu Ile Val Ile Gly Ala Gly Tyr
      210      215      220
Ile Gly Leu Glu Met Gly Ser Val Trp Gly Arg Leu Gly Ser Glu Val
      225      230      235      240
Thr Val Val Glu Phe Ala Ala Asp Ile Val Pro Ala Met Asp Gly Glu
      245      250      255

```

Ile Arg Lys Gln Phe Gln Arg Ser Leu Glu Lys Gln Lys Met Lys Phe  
 260 265 270  
 Met Leu Lys Thr Lys Val Val Gly Val Asp Ser Ser Gly Asp Gly Val  
 275 280 285  
 Lys Leu Ile Val Glu Pro Ala Glu Gly Gly Glu Gln Thr Thr Leu Glu  
 290 295 300  
 Ala Asp Val Val Leu Val Ser Ala Gly Arg Thr Pro Phe Thr Ser Gly  
 305 310 315 320  
 Leu Asp Leu Glu Lys Ile Gly Val Glu Thr Asp Lys Gly Gly Arg Ile  
 325 330 335  
 Leu Val Asn Glu Arg Phe Ser Thr Asn Val Ser Gly Val Tyr Ala Ile  
 340 345 350  
 Gly Asp Val Ile Pro Gly Pro Met Leu Ala His Lys Ala Glu Glu Asp  
 355 360 365  
 Gly Val Ala Cys Val Glu Phe Ile Ala Gly Lys His Gly His Val Asp  
 370 375 380  
 Tyr Asp Lys Val Pro Gly Val Val Tyr Thr Tyr Pro Glu Val Ala Ser  
 385 390 395 400  
 Val Gly Lys Thr Glu Glu Gln Leu Lys Lys Glu Gly Val Ser Tyr Asn  
 405 410 415  
 Val Gly Lys Phe Pro Phe Met Ala Asn Ser Arg Ala Lys Ala Ile Asp  
 420 425 430  
 Thr Ala Glu Gly Met Val Lys Ile Leu Ala Asp Lys Glu Thr Asp Lys  
 435 440 445  
 Ile Leu Gly Val His Ile Met Ser Pro Asn Ala Gly Glu Leu Ile His  
 450 455 460  
 Glu Ala Val Leu Ala Ile Asn Tyr Asp Ala Ser Ser Glu Asp Ile Ala  
 465 470 475 480  
 Arg Val Cys His Ala His Pro Thr Met Ser Glu Ala Ile Lys Glu Ala  
 485 490 495  
 Ala Met Ala Thr Tyr Asp Lys Pro Ile His Met  
 500 505

&lt;210&gt; 1229

&lt;211&gt; 1446

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1229

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tgcaacgtca ctggcttcag ctctcatcata ggattgtcat gtgccttaga tactttgagt	300
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cttttgatcc ttggccaaga cctttctatt gctcacgaag ccggaataa tgccacctgg	480
cttatccag gactgtttgc ttacgctgtt ctacagcgcg tcactcgcta ctttcaaac	540
cagagtttga tcacacctct cctcatcacc tcctatgttg tgttctgtat ccacgttcct	600
ctctgctggt ttttggttta caactcaggg cttggaatc ttggaggagc ttgggctatc	660
agtttgtcaa actggctcta tgccattttc cttggatctt tcattgacta ctctctgcgc	720
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aaatatgctc ttccctctgc ggctatgatt tgccctagagt ggtggtctta tgaacttata	840
atattactct ctggctctct acccaaccga caactggaga cttctgtgct ctctgtctgt	900
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gcaaggggat gcggatggca acatatagga gcttacataa acttaggagc tttctatctc	1260
tgggggatac ccattgctgc atcttttagcc ttctggattc atctgaaagg tgttggcctt	1320
tggattggaa tccaagccgg tgccgttctg caaacgcttc tgcttgctct tgcacgggc	1380
tgtacaacct gggaaagcca ggccgataaa gcgaggaatc gaatggcttt ggcctatgga	1440
acataa	1446



&lt;210&gt; 1230

&lt;211&gt; 481

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1230

Met Gly Asp Ala Glu Ser Thr Lys Asp Arg Leu Leu Leu Pro Val Glu  
 1 5 10 15

Arg Val Glu Asn Val Thr Trp Ser Asp Leu Arg Asp Gly Ser Phe Thr  
 20 25 30

Val Glu Leu Lys Arg Leu Ile Phe Phe Ala Ala Pro Met Ala Ala Val  
 35 40 45

Val Ile Ala Gln Phe Met Leu Gln Ile Val Ser Met Met Met Val Gly  
 50 55 60

His Leu Gly Asn Leu Ser Leu Ala Ser Ala Ser Leu Ala Ser Ser Phe  
 65 70 75 80

Cys Asn Val Thr Gly Phe Ser Phe Ile Ile Gly Leu Ser Cys Ala Leu  
 85 90 95

Asp Thr Leu Ser Gly Gln Ala Tyr Gly Ala Lys Leu Tyr Arg Lys Leu  
 100 105 110

Gly Val Gln Thr Tyr Thr Ala Met Phe Cys Leu Ala Leu Val Cys Leu  
 115 120 125

Pro Leu Ser Leu Ile Trp Phe Asn Met Glu Lys Leu Leu Ile Leu  
 130 135 140

Gly Gln Asp Pro Ser Ile Ala His Glu Ala Gly Lys Tyr Ala Thr Trp  
 145 150 155 160

Leu Ile Pro Gly Leu Phe Ala Tyr Ala Val Leu Gln Pro Leu Thr Arg  
 165 170 175

Tyr Phe Gln Asn Gln Ser Leu Ile Thr Pro Leu Leu Ile Thr Ser Tyr  
 180 185 190

Val Val Phe Cys Ile His Val Pro Leu Cys Trp Phe Leu Val Tyr Asn  
 195 200 205

047-E2F-PCT.ST25.txt

Ser Gly Leu Gly Asn Leu Gly Gly Ala Leu Ala Ile Ser Leu Ser Asn  
210 215 220

Trp Leu Tyr Ala Ile Phe Leu Gly Ser Phe Met Tyr Tyr Ser Ser Ala  
225 230 235 240

Cys Ser Glu Thr Arg Ala Pro Leu Ser Met Glu Ile Phe Asp Gly Ile  
245 250 255

Gly Glu Phe Phe Lys Tyr Ala Leu Pro Ser Ala Ala Met Ile Cys Leu  
260 265 270

Glu Trp Trp Ser Tyr Glu Leu Ile Ile Leu Leu Ser Gly Leu Leu Pro  
275 280 285

Asn Pro Gln Leu Glu Thr Ser Val Leu Ser Val Cys Leu Gln Thr Ile  
290 295 300

Ser Thr Met Tyr Ser Ile Pro Leu Ala Ile Ala Ala Ala Ser Thr  
305 310 315 320

Arg Ile Ser Asn Glu Leu Gly Ala Gly Asn Ser Arg Ala Ala His Ile  
325 330 335

Val Val Tyr Ala Ala Met Ser Leu Ala Val Ile Asp Ala Leu Ile Val  
340 345 350

Ser Met Ser Leu Leu Ile Gly Arg Asn Leu Phe Gly His Ile Phe Ser  
355 360 365

Ser Asp Lys Glu Thr Ile Asp Tyr Val Ala Lys Met Ala Pro Leu Val  
370 375 380

Ser Ile Ser Leu Met Leu Asp Ala Leu Gln Gly Val Leu Ser Gly Ile  
385 390 395 400

Ala Arg Gly Cys Gly Trp Gln His Ile Gly Ala Tyr Ile Asn Leu Gly  
405 410 415

Ala Phe Tyr Leu Trp Gly Ile Pro Ile Ala Ala Ser Leu Ala Phe Trp  
420 425 430

Ile His Leu Lys Gly Val Gly Leu Trp Ile Gly Ile Gln Ala Gly Ala  
435 440 445

Val Leu Gln Thr Leu Leu Leu Ala Leu Val Thr Gly Cys Thr Asn Trp  
450 455 460

Glu Ser Gln Ala Asp Lys Ala Arg Asn Arg Met Ala Leu Ala Tyr Gly  
 465 470 475

Thr

<210> 1231

<211> 861

<212> DNA

<213> Arabidopsis thaliana

<400> 1231  
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 atcaciaaaca acggcgatct tcttacctc tctctcgaca aagcttcagg ctcaggattc 180  
 caatccaaga acgaatatatt gttcggtaaa atcgacatgc agatcaaact cgttgccgga 240  
 aactccgctg gaactgtcac cgcttactat ttgaaatccc ctggatctac atgggacgag 300  
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 gattttccaca cttactctat cctctggaac ccacaacgca tcatattctc cgtggatgga 480  
 actcccataa gagaattcaa gaacatggaa tctcaaggaa ctctgtttcc taagaaccag 540  
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 gtcaaaacgg actggtctaa agctcccttc actgcttctc accgcggctt caacgaagaa 660  
 gcttgctgctg tgatcaacgg ccagttctta tgccttaacg tgtcaggaca agggagtact 720  
 gggtcgtggt tgtctcagga gctagactcg acgggtcaag aacagatgag atgggtacag 780  
 aataactaca tgatttaca ttactgtacg gacgctaaaa gggtccctca aggtcttcca 840  
 cgcgagtgtct tagctgcgta a 861

<210> 1232

<211> 286

<212> PRT

<213> Arabidopsis thaliana

<400> 1232

047-E2F-PCT.ST25.txt

Met Ala Met Ile Ser Tyr Ser Thr Ile Val Val Ala Leu Leu Ala Ser  
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Phe Met Ile Cys Ser Val Ser Ala Asn Phe Gln Arg Asp Val Glu Ile  
20 25 30  
Thr Trp Gly Asp Gly Arg Gly Gln Ile Thr Asn Asn Gly Asp Leu Leu  
35 40 45  
Thr Leu Ser Leu Asp Lys Ala Ser Gly Ser Gly Phe Gln Ser Lys Asn  
50 55 60  
Glu Tyr Leu Phe Gly Lys Ile Asp Met Gln Ile Lys Leu Val Ala Gly  
65 70 75 80  
Asn Ser Ala Gly Thr Val Thr Ala Tyr Tyr Leu Lys Ser Pro Gly Ser  
85 90 95  
Thr Trp Asp Glu Ile Asp Phe Glu Phe Leu Gly Asn Leu Ser Gly Asp  
100 105 110  
Pro Tyr Thr Leu His Thr Asn Val Phe Thr Gln Gly Lys Gly Asp Arg  
115 120 125  
Glu Gln Gln Phe Lys Leu Trp Phe Asp Pro Thr Ser Asp Phe His Thr  
130 135 140  
Tyr Ser Ile Leu Trp Asn Pro Gln Arg Ile Ile Phe Ser Val Asp Gly  
145 150 155 160  
Thr Pro Ile Arg Glu Phe Lys Asn Met Glu Ser Gln Gly Thr Leu Phe  
165 170 175  
Pro Lys Asn Gln Pro Met Arg Met Tyr Ser Ser Leu Trp Asn Ala Glu  
180 185 190  
Glu Trp Ala Thr Arg Gly Gly Leu Val Lys Thr Asp Trp Ser Lys Ala  
195 200 205  
Pro Phe Thr Ala Ser Tyr Arg Gly Phe Asn Glu Glu Ala Cys Val Val  
210 215 220  
Ile Asn Gly Gln Ser Ser Cys Pro Asn Val Ser Gly Gln Gly Ser Thr  
225 230 235 240  
Gly Ser Trp Leu Ser Gln Glu Leu Asp Ser Thr Gly Gln Glu Gln Met  
245 250 255

047-E2F-PCT.ST25.txt

Arg Trp Val Gln Asn Asn Tyr Met Ile Tyr Asn Tyr Cys Thr Asp Ala  
260 265 270

Lys Arg Phe Pro Gln Gly Leu Pro Arg Glu Cys Leu Ala Ala  
275 280 285

<210> 1233

<211> 438

<212> DNA

<213> Arabidopsis thaliana

<400> 1233  
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gaaccagcag cagcggcaga gaagaaacca aaagccggaa agaaactccc gaaggaacca 120  
gccggcgccg gagacaagaa gaagaagaga tcaaagaaga acgttgagac atacaagatc 180  
tacatcttca aggtgttgaa gcaagttcat ccagatatcg gaatctccag caaagccatg 240  
ggaatcatga acagtttcat caatgatatc tttgagaaac ttgctgggtga gtcttcgaag 300  
cttgcgaggt acaacaagaa gccgacgatt acttctaggg agattcagac tgcggtgaga 360  
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aagtttacga gttcttag 438

<210> 1234

<211> 145

<212> PRT

<213> Arabidopsis thaliana

<400> 1234

Met Ala Lys Ala Asp Lys Lys Pro Ala Glu Lys Lys Pro Ala Glu Lys  
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Thr Pro Ala Ala Glu Pro Ala Ala Ala Glu Lys Lys Pro Lys Ala  
20 25 30

Gly Lys Lys Leu Pro Lys Glu Pro Ala Gly Ala Gly Asp Lys Lys Lys  
35 40 45

Lys Arg Ser Lys Lys Asn Val Glu Thr Tyr Lys Ile Tyr Ile Phe Lys  
Page 1927

50

55

Val Leu Lys Gln Val His Pro Asp Ile Gly Ile Ser Ser Lys Ala Met  
65 70 80

Gly Ile Met Asn Ser Phe Ile Asn Asp Ile Phe Glu Lys Leu Ala Gly  
85 90 95

Glu Ser Ser Lys Leu Ala Arg Tyr Asn Lys Lys Pro Thr Ile Thr Ser  
100 105 110

Arg Glu Ile Gln Thr Ala Val Arg Leu Val Leu Pro Gly Glu Leu Ala  
115 120 125

Lys His Ala Val Ser Glu Gly Thr Lys Ala Val Thr Lys Phe Thr Ser  
130 135 140

Ser  
145

&lt;210&gt; 1235

&lt;211&gt; 2247

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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tcagagtccc aacaaatctc tagttcatgg cgttcacctt ccggtgactt tgccttcggg 180  
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gacaagacca tcgtgtggca cgacaagcc gtcaacacaa ccaccggtct tgcctctaata 300  
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gagctgtgga gagcgttgag tgggtggtct gtttctcgag ggcgatttac tgacgacgga 420  
aacttcgttc ttttcagaga tgggtcagaa gattctgacg aggttctatg gtcgagcttt 480  
gaaaatccca ccgacctct gttacctaat cagaatatag aagttggaag gaatctgtca 540  
tcacgtagga cagagacgag cttcaaaaaa ggaagattca gcctacgtct agaggatgac 600  
ggaaatcttc agcttcactc tctcaacgcc gagactgcct cagaatcaga catatactct 660  
cagtactacg aaagtaatac caacgatcca aacaaccccg ggattcaatt agttttcaac 720  
cagtcagggg aaatatatgt tcttcaaagg aacaattcaa gattcgtcgt caaagataga 780

047-E2F-PCT.ST25.txt

gatccggatt	tttctatcgc	cgcgccgttc	tacatttcga	cgggccccga	tgatgcactt	840
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tgtgagtgc	ctgagaggtt	tgtgttaaag	gatccgagca	atgagtatgg	tgattgtttg	960
ccagattttg	agatgcagac	ttgtagacca	gagaacacaa	ccgaaactc	agatgtgaat	1020
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gccaaactatg	atgaagaaag	atgtaaagct	tcttgtctta	gcgattgttt	atgtgctcgc	1140
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gagcatggga	tgagacctaa	catgagaaat	gttacacaga	tgcttgaagg	tgtgattcaa	2160
gtttttgatc	ctccaaatcc	gtctccttat	agcactttca	cttggtctga	tgaatctttg	2220
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<210> 1236

<211> 748

<212> PRT

<213> *Arabidopsis thaliana*

<400> 1236

047-E2F-PCT.ST25.txt

Met Gly Ser Leu Ser Cys Ser Ile Ile His Leu Val Leu Ile Leu Gln  
1 5 10 15

Leu Gln Thr Phe Phe Val Phe Ser Gln Asn Ile Arg Asn Gly Ser Val  
20 25 30

Pro Val Gly Glu Ser Leu Thr Ala Ser Glu Ser Gln Gln Ile Ser Ser  
35 40 45

Ser Trp Arg Ser Pro Ser Gly Asp Phe Ala Phe Gly Phe Arg Lys Ile  
50 55 60

Gln Pro Asn Asp Gly Phe Thr Leu Ser Ile Trp Phe Asp Lys Ile Ser  
65 70 75 80

Asp Lys Thr Ile Val Trp His Ala Gln Ala Val Asn Thr Thr Thr Gly  
85 90 95

Leu Val Pro Asn Gly Ser Lys Val Thr Leu Thr Ala Asp Gly Gly Leu  
100 105 110

Val Ile Ala Asp Pro Arg Gly Gln Glu Leu Trp Arg Ala Leu Ser Gly  
115 120 125

Gly Ser Val Ser Arg Gly Arg Phe Thr Asp Asp Gly Asn Phe Val Leu  
130 135 140

Phe Arg Asp Gly Ser Glu Asp Ser Asp Glu Val Leu Trp Ser Ser Phe  
145 150 155 160

Glu Asn Pro Thr Asp Thr Leu Leu Pro Asn Gln Asn Ile Glu Val Gly  
165 170 175

Arg Asn Leu Ser Ser Arg Arg Thr Glu Thr Ser Phe Lys Lys Gly Arg  
180 185 190

Phe Ser Leu Arg Leu Glu Asp Asp Gly Asn Leu Gln Leu His Ser Leu  
195 200 205

Asn Ala Glu Thr Ala Ser Glu Ser Asp Ile Tyr Ser Gln Tyr Tyr Glu  
210 215 220

Ser Asn Thr Asn Asp Pro Asn Asn Pro Gly Ile Gln Leu Val Phe Asn  
225 230 235 240

Gln Ser Gly Glu Ile Tyr Val Leu Gln Arg Asn Asn Ser Arg Phe Val  
245 250 255



047-E2F-PCT.ST25.txt

Val Lys Asp Arg Asp Pro Asp Phe Ser Ile Ala Ala Pro Phe Tyr Ile  
260 265 270

Ser Thr Gly Pro Asp Asp Ala Leu Gly Asn Met Ala Cys Gly Tyr Asn  
275 280 285

Asn Ile Cys Ser Leu Gly Asn Asn Lys Arg Pro Lys Cys Glu Cys Pro  
290 295 300

Glu Arg Phe Val Leu Lys Asp Pro Ser Asn Glu Tyr Gly Asp Cys Leu  
305 310 315 320

Pro Asp Phe Glu Met Gln Thr Cys Arg Pro Glu Asn Gln Thr Ala Asn  
325 330 335

Ser Asp Val Asn Leu Tyr Glu Phe Ile Thr Leu Glu Lys Thr Asn Trp  
340 345 350

Pro Phe Gly Asp Tyr Glu Ser Tyr Ala Asn Tyr Asp Glu Glu Arg Cys  
355 360 365

Lys Ala Ser Cys Leu Ser Asp Cys Leu Cys Ala Ala Val Ile Phe Gly  
370 375 380

Thr Asn Arg Asp Leu Lys Cys Trp Lys Lys Lys Phe Pro Leu Ser His  
385 390 395 400

Gly Glu Arg Ser Pro Arg Gly Asp Ser Asp Thr Phe Ile Lys Val Arg  
405 410 415

Asn Arg Ser Ile Ala Asp Val Pro Val Thr Gly Asn Arg Ala Lys Lys  
420 425 430

Leu Asp Trp Val Phe Thr Tyr Gly Glu Leu Ala Glu Ala Thr Arg Asp  
435 440 445

Phe Thr Glu Glu Leu Gly Arg Gly Ala Phe Gly Ile Val Tyr Lys Gly  
450 455 460

Tyr Leu Glu Val Ala Gly Gly Ser Glu Val Thr Val Ala Val Lys Lys  
465 470 475 480

Leu Asp Arg Leu Asp Leu Asp Asn Glu Lys Glu Phe Lys Asn Glu Val  
485 490 495

Lys Val Ile Gly Gln Ile His His Lys Asn Leu Val Arg Leu Ile Gly

Phe Cys Asn Glu Gly Gln Ser Gln Met Ile Val Tyr Glu Phe Leu Pro  
 515 520  
 Gln Gly Thr Leu Ala Asn Phe Leu Phe Arg Arg Pro Arg Pro Ser Trp  
 530 535  
 Glu Asp Arg Lys Asn Ile Ala Val Ala Ile Ala Arg Gly Ile Leu Tyr  
 545 550 555  
 Leu His Glu Glu Cys Ser Glu Gln Ile Ile His Cys Asp Ile Lys Pro  
 565 570 575  
 Gln Asn Ile Leu Leu Asp Glu Tyr Tyr Thr Pro Arg Ile Ser Asp Phe  
 580 585 590  
 Gly Leu Ala Lys Leu Leu Leu Met Asn Gln Thr Tyr Thr Leu Thr Asn  
 595 600 605  
 Ile Arg Gly Thr Lys Gly Tyr Val Ala Pro Glu Trp Phe Arg Asn Ser  
 610 615 620  
 Pro Ile Thr Ser Lys Val Asp Val Tyr Ser Tyr Gly Val Met Leu Leu  
 625 630 635 640  
 Glu Ile Val Cys Cys Lys Lys Ala Val Asp Leu Glu Asp Asn Val Ile  
 645 650 655  
 Leu Ile Asn Trp Ala Tyr Asp Cys Phe Arg Gln Gly Arg Leu Glu Asp  
 660 665 670  
 Leu Thr Glu Asp Asp Ser Glu Ala Met Asn Asp Met Glu Thr Val Glu  
 675 680 685  
 Arg Tyr Val Lys Ile Ala Ile Trp Cys Ile Gln Glu Glu His Gly Met  
 690 695 700  
 Arg Pro Asn Met Arg Asn Val Thr Gln Met Leu Glu Gly Val Ile Gln  
 705 710 715 720  
 Val Phe Asp Pro Pro Asn Pro Ser Pro Tyr Ser Thr Phe Thr Trp Ser  
 725 730 735  
 Asp Glu Ser Leu Ser Ser Asp Pro Val Ser Leu Val  
 740 745

&lt;210&gt; 1237

&lt;211&gt; 777

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1237

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ggtatgtaca ccggtcagtt cttgtactgc ggtaagaaag ctactctcgt cgttggaaat   300
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aaggcaggaa acgcgtacca caagtaccgt gtgaagagga actcatggcc taaggttcgt   600
ggtgtggcta tgaatccagt ggagcatcct catggaggag gtaaccatca gcacattggt   660
cacgccagta ctgttagggc tgatgcacct cctggacaga aggttggtct tattgctgca   720
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&lt;210&gt; 1238

&lt;211&gt; 258

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1238

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Met Gly Arg Val Ile Arg Ala Gln Arg Lys Gly Ala Gly Ser Val Phe
 1           5           10          15

```

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Lys Ser His Thr His His Arg Lys Gly Pro Ala Lys Phe Arg Ser Leu
 20           25           30

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Asp Phe Gly Glu Arg Asn Gly Tyr Leu Lys Gly Val Val Thr Glu Ile
 35           40           45

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Ile His Asp Pro Gly Arg Gly Ala Pro Leu Ala Arg Val Thr Phe Arg

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50

55

60

His Pro Phe Arg Phe Lys Lys Gln Lys Glu Leu Phe Val Ala Ala Glu  
65 70 75 80

Gly Met Tyr Thr Gly Gln Phe Leu Tyr Cys Gly Lys Lys Ala Thr Leu  
85 90 95

Val Val Gly Asn Val Leu Pro Leu Arg Ser Ile Pro Glu Gly Ala Val  
100 105 110

Val Cys Asn Val Glu His His Val Gly Asp Arg Gly Val Leu Ala Arg  
115 120 125

Ala Ser Gly Asp Tyr Ala Ile Val Ile Ala His Asn Pro Asp Ser Asp  
130 135 140

Thr Thr Arg Ile Lys Leu Pro Ser Gly Ser Lys Lys Ile Val Pro Ser  
145 150 155 160

Gly Cys Arg Ala Met Ile Gly Gln Val Ala Gly Gly Gly Arg Thr Glu  
165 170 175

Lys Pro Met Leu Lys Ala Gly Asn Ala Tyr His Lys Tyr Arg Val Lys  
180 185 190

Arg Asn Ser Trp Pro Lys Val Arg Gly Val Ala Met Asn Pro Val Glu  
195 200 205

His Pro His Gly Gly Gly Asn His Gln His Ile Gly His Ala Ser Thr  
210 215 220

Val Arg Arg Asp Ala Pro Pro Gly Gln Lys Val Gly Leu Ile Ala Ala  
225 230 235 240

Arg Arg Thr Gly Arg Leu Arg Gly Gln Ala Ala Ala Ser Ala Ala Lys  
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Ala Asp

<210> 1239

<211> 1839

<212> DNA

<213> Arabidopsis thaliana

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tcgtcgtcgg agaatgattg gtggtctgat ctcgtggtcg gacttcaagc cgcaagcgt    240
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1839

&lt;210&gt; 1240

&lt;211&gt; 612

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1240

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1 5 10 15Asp Ile Val Glu Ile Pro Leu Asn Thr Gly Met Phe Lys Lys Asp Cys  
20 25 30Ala Asp Leu Thr Arg Arg Val Cys Leu Leu Thr His Leu Leu Glu Glu  
35 40 45Ile Arg Asp Ser Thr Pro Ile Asp Ser Ala Ala Ser Ser Ser Ser Glu  
50 55 60Asn Asp Trp Trp Ser Asp Leu Val Val Gly Leu Gln Ala Ala Lys Arg  
65 70 75 80Leu Leu Ser Thr Ala Arg Phe Gln Ala Arg Asp Ser Ser Asp Gly Ala  
85 90 95Ala Lys Arg Ile Ser Phe Gln Phe Gln Cys Val Thr Trp Lys Leu Glu  
100 105 110Lys Ala Leu Ser Asn Leu Pro Tyr Asp Leu Tyr Asp Ile Ser Asp Glu  
115 120 125Val Gly Glu Gln Val Glu Leu Ala Arg Ser Gln Leu Arg Arg Ala Met  
130 135 140Gln Arg Tyr Gly Ser Leu Asn Ser Asn Lys Phe Ser Ser Ala Leu Ser  
145 150 155 160Glu Pro Met Glu Arg Asp Gly Phe Ser Asn Val Ile Lys Ile Lys Ala  
165 170 175Glu Glu Lys Leu Glu Ser Val Ser Glu Thr Leu His Phe Gly Glu Glu  
180 185 190

Glu Glu Lys Gln Ser Ser Pro Pro Leu Arg Arg Ser Ser Ser Ile Ser  
 195 200 205  
 Leu Ala Tyr Tyr Leu Ser Lys Asp Ala Asp Thr Asp Arg Leu Asp Lys  
 210 215 220  
 Met Val Asn Lys Asn Thr Asp Glu Ser Lys Lys Ser Asp Lys Leu Thr  
 225 230 235 240  
 Ile Pro Val Asp Phe Leu Cys Pro Val Ser Leu Glu Leu Met Lys Asp  
 245 250 255  
 Pro Val Ile Val Ala Thr Gly Gln Thr Tyr Glu Arg Ala Tyr Ile Gln  
 260 265 270  
 Arg Trp Ile Asp Cys Gly Asn Leu Thr Cys Pro Lys Thr Gln Gln Lys  
 275 280 285  
 Leu Glu Asn Phe Thr Leu Thr Pro Asn Tyr Val Leu Arg Ser Leu Ile  
 290 295 300  
 Ser Arg Trp Cys Ala Glu His Asn Ile Glu Gln Pro Ala Gly Tyr Ile  
 305 310 315 320  
 Asn Gly Arg Thr Lys Asn Ser Gly Asp Met Ser Val Ile Arg Ala Leu  
 325 330 335  
 Val Gln Arg Leu Ser Ser Arg Ser Thr Glu Asp Arg Arg Asn Ala Val  
 340 345 350  
 Ser Glu Ile Arg Ser Leu Ser Lys Arg Ser Thr Asp Asn Arg Ile Leu  
 355 360 365  
 Ile Ala Glu Ala Gly Ala Ile Pro Val Leu Val Asn Leu Leu Thr Ser  
 370 375 380  
 Glu Asp Val Ala Thr Gln Glu Asn Ala Ile Thr Cys Val Leu Asn Leu  
 385 390 395 400  
 Ser Ile Tyr Glu Asn Asn Lys Glu Leu Ile Met Phe Ala Gly Ala Val  
 405 410 415  
 Thr Ser Ile Val Gln Val Leu Arg Ala Gly Thr Met Glu Ala Arg Glu  
 420 425 430  
 Asn Ala Ala Ala Thr Leu Phe Ser Leu Ser Leu Ala Asp Glu Asn Lys  
 435 440 445

047-E2F-PCT.ST25.txt

Ile Ile Ile Gly Gly Ser Gly Ala Ile Pro Ala Leu Val Asp Leu Leu  
450 455 460

Glu Asn Gly Thr Pro Arg Gly Lys Lys Asp Ala Ala Thr Ala Leu Phe  
465 470 475 480

Asn Leu Cys Ile Tyr His Gly Asn Lys Gly Arg Ala Val Arg Ala Gly  
485 490 495

Ile Val Thr Ala Leu Val Lys Met Leu Ser Asp Ser Thr Arg His Arg  
500 505 510

Met Val Asp Glu Ala Leu Thr Ile Leu Ser Val Leu Ala Asn Asn Gln  
515 520 525

Asp Ala Lys Ser Ala Ile Val Lys Ala Asn Thr Leu Pro Ala Leu Ile  
530 535 540

Gly Ile Leu Gln Thr Asp Gln Thr Arg Asn Arg Glu Asn Ala Ala Ala  
545 550 555 560

Ile Leu Leu Ser Leu Cys Lys Arg Asp Thr Glu Lys Leu Ile Thr Ile  
565 570 575

Gly Arg Leu Gly Ala Val Val Pro Leu Met Asp Leu Ser Lys Asn Gly  
580 585 590

Thr Glu Arg Gly Lys Arg Lys Ala Ile Ser Leu Leu Glu Leu Leu Arg  
595 600 605

Lys Ala Cys Gln  
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<210> 1241

<211> 1500

<212> DNA

<213> Arabidopsis thaliana

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tgggaagatg cttcaatctt ggattatgag atgggtgtgg agcctggatt gcaagagagc 180  
attcaagcaa atgttgattt cttacaaggt gttagggtc aagcgtggga tccaaggagc 240



047-E2F-PCT.ST25.txt

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agtcttcttc	catctgttaa	gcataatatg	tcaacagctc	cgggtccatt	cactgggcag	480
cccgttctag	ccgtgttccc	ttatgtaagg	gaggctaata	acgttgcttc	acagagtcag	540
aacaataaca	actgtggtgc	tcgagagttc	gatttgccta	agccggttct	tgttgatgag	600
aggaaggtc	atgttgtgga	ggaacatgag	atgaaagatg	aagatgatgt	ggaagaagga	660
gagaaccttc	ctcccgggtc	gtatgagata	ttgcagcttg	agaaagaaga	gattctcgca	720
ccgcatactc	acttctgcac	gatatgtggc	aagggtttca	agagagacgc	gaatttgagg	780
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aagaatcact	ataaacgcac	ccactgcatg	aaaagcttca	cttgacgccc	gtgccatacc	1020
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tctactcaga	gagggagctc	tgaaggcggg	aacaacaacc	aaggaatggt	tggcttcaat	1260
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cacgagtttc	cgcgactgat	gtttgatgat	tcagagagtt	cttttcaaat	gcttattgcg	1440
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<210> 1242

<211> 499

<212> PRT

<213> Arabidopsis thaliana

<400> 1242

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047-E2F-PCT.ST25.txt

Ala Gly Phe Thr Ser Gln Gln Lys Trp Glu Asp Ala Ser Ile Leu Asp  
35 40 45

Tyr Glu Met Gly Val Glu Pro Gly Leu Gln Glu Ser Ile Gln Ala Asn  
50 55 60

Val Asp Phe Leu Gln Gly Val Arg Ala Gln Ala Trp Asp Pro Arg Thr  
65 70 75 80

Met Leu Ser Asn Leu Ser Phe Met Glu Gln Lys Ile His Gln Leu Gln  
85 90 95

Asp Leu Val His Leu Leu Val Gly Arg Gly Gly Gln Leu Gln Gly Arg  
100 105 110

Gln Asp Glu Leu Ala Ala Gln Gln Gln Gln Leu Ile Thr Thr Asp Leu  
115 120 125

Thr Ser Ile Ile Ile Gln Leu Ile Ser Thr Ala Gly Ser Leu Leu Pro  
130 135 140

Ser Val Lys His Asn Met Ser Thr Ala Pro Gly Pro Phe Thr Gly Gln  
145 150 155 160

Pro Gly Ser Ala Val Phe Pro Tyr Val Arg Glu Ala Asn Asn Val Ala  
165 170 175

Ser Gln Ser Gln Asn Asn Asn Asn Cys Gly Ala Arg Glu Phe Asp Leu  
180 185 190

Pro Lys Pro Val Leu Val Asp Glu Arg Glu Gly His Val Val Glu Glu  
195 200 205

His Glu Met Lys Asp Glu Asp Asp Val Glu Glu Gly Glu Asn Leu Pro  
210 215 220

Pro Gly Ser Tyr Glu Ile Leu Gln Leu Glu Lys Glu Glu Ile Leu Ala  
225 230 235 240

Pro His Thr His Phe Cys Thr Ile Cys Gly Lys Gly Phe Lys Arg Asp  
245 250 255

Ala Asn Leu Arg Met His Met Arg Gly His Gly Asp Glu Tyr Lys Thr  
260 265 270

Ala Ala Ala Leu Ala Lys Pro Asn Lys Glu Ser Val Pro Gly Ser Glu  
275 280 285

047-E2F-PCT.ST25.txt

Pro Met Leu Ile Lys Arg Tyr Ser Cys Pro Phe Leu Gly Cys Lys Arg  
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Asn Lys Glu His Lys Lys Phe Gln Pro Leu Lys Thr Ile Leu Cys Val  
 305 310 315 320

Lys Asn His Tyr Lys Arg Thr His Cys Asp Lys Ser Phe Thr Cys Ser  
 325 330 335

Arg Cys His Thr Lys Lys Phe Ser Val Ile Ala Asp Leu Lys Thr His  
 340 345 350

Glu Lys His Cys Gly Lys Asn Lys Trp Leu Cys Ser Cys Gly Thr Thr  
 355 360 365

Phe Ser Arg Lys Asp Lys Leu Phe Gly His Ile Ala Leu Phe Gln Gly  
 370 375 380

His Thr Pro Ala Ile Pro Leu Glu Glu Thr Lys Pro Ser Ala Ser Thr  
 385 390 395 400

Ser Thr Gln Arg Gly Ser Ser Glu Gly Gly Asn Asn Asn Gln Gly Met  
 405 410 415

Val Gly Phe Asn Leu Gly Ser Ala Ser Asn Ala Asn Gln Glu Thr Thr  
 420 425 430

Gln Pro Gly Met Thr Asp Gly Arg Ile Cys Phe Glu Glu Ser Phe Ser  
 435 440 445

Pro Met Asn Phe Asp Thr Cys Asn Phe Gly Gly Phe His Glu Phe Pro  
 450 455 460

Arg Leu Met Phe Asp Asp Ser Glu Ser Ser Phe Gln Met Leu Ile Ala  
 465 470 475 480

Asn Ala Cys Gly Phe Ser Pro Arg Asn Val Gly Glu Ser Val Ser Asp  
 485 490 495

Thr Ser Leu

<210> 1243

<211> 1434

<212> DNA

<213> *Arabidopsis thaliana*

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gacaacgact cactggcgct atcgccgaga tcggagtagc atagtcagcc acgcgtacgg    180
ttcatgtgta cttttggagg aaggatcttg ccacgtccgc cgataaatca gctctgttac    240
gtcggcggcg ataatcgcat ggtcgctggt catcgtcaca ctactttcgc ctctctcctt    300
agtaaacttg ctaactcttc cggtaaaaagc aacataagcg tgaagtacca gctaccaaac    360
gaagatcttg acgcgttgat ttccgtatca acggacgaag atgtagagaa catgatggac    420
gaatacgacc gcgtcgacac gaatcaaaac ccacgcgcct ctctctctcg tctttttctc    480
ttcaccaaaa acgtcgccgg agaagaagat aacgatatgc gagctagcag tatcagctct    540
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tccgccgcgg caaccgcggg atctaacggg gggtcgggta gagtctttga gcgagttaga    660
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gttaggccgg ttatgatggc agttgatgga atgaaccgga cgggttatta tggaatgaaa   1320
acaccgggtc cggttcaaat gtatcagcat cacactggtg tgggtgttcc tgggtgtagaa   1380
gaacaacaac aatacagaac cgaacgggat tcggatacgg gtcgggcttc ttag          1434

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&lt;210&gt; 1244

&lt;211&gt; 477

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1244

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 20      25
Ala Ser Ile Pro Pro Pro Glu Leu Asp Asn Asp Ser Leu Ala Ser Ser
 35      40      45
Pro Arg Ser Glu Tyr Asp Ser Gln Pro Arg Val Arg Phe Met Cys Thr
 50      55      60
Phe Gly Gly Arg Ile Leu Pro Arg Pro Pro Asp Asn Gln Leu Cys Tyr
 65      70      75
Val Gly Gly Asp Asn Arg Met Val Ala Val His Arg His Thr Thr Phe
 85      90      95
Ala Ser Leu Leu Ser Lys Leu Ala Lys Leu Ser Gly Lys Ser Asn Ile
100      105
Ser Val Lys Tyr Gln Leu Pro Asn Glu Asp Leu Asp Ala Leu Ile Ser
115      120      125
Val Ser Thr Asp Glu Asp Val Glu Asn Met Met Asp Glu Tyr Asp Arg
130      135      140
Val Ala Gln Asn Gln Asn Pro Arg Ala Ser Arg Leu Arg Leu Phe Leu
145      150      155
Phe Thr Lys Asn Val Ala Gly Glu Glu Asp Asn Asp Ser Arg Ala Ser
165      170      175
Ser Ile Ser Ser Leu Leu Asp Ser Ser Val Asn Arg Glu Gln Trp Phe
180      185      190
Leu Asp Ala Leu Asn Leu Gly Ser Ser Ala Ala Ala Thr Ala Val Ser
195      200      205
Asn Gly Gly Ser Gly Arg Val Phe Glu Arg Val Arg Ser Glu Val Ser
210      215      220
Ser Ile Val Ser Glu Val Pro Asp Tyr Leu Phe Gly Leu Asp Asn Phe
225      230      235      240

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047-E2F-PCT.ST25.txt

Asp Glu Thr Ala Pro Pro His Glu Leu Arg Asp Arg Asp Pro Arg Ala  
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 Lys Ile Gln Arg Glu Val Ser Thr Leu Ser Asp Pro Gly Ser Pro Arg  
 260 265 270  
 Arg Asp Val Pro Ser Pro Tyr Gly Ser Thr Ser Ser Ala Pro Val Met  
 275 280 285  
 Arg Ile Ser Thr Pro Glu Leu Pro Pro Pro Val Phe Ile Lys Pro Glu  
 290 295 300  
 Ser Pro Glu Pro Val Ser Thr Pro Lys Ser Asn Pro Gln Pro Glu Gln  
 305 310 315 320  
 Val Met Gln Gln Ser Asn Leu Pro Val Asn Ser Gln Trp Gln Tyr Ala  
 325 330 335  
 Pro Gly Pro Gly Gln Gln Val His Tyr Gln Gly His Thr Ile His Gln  
 340 345 350  
 Ser Pro Val Tyr Tyr Val Pro Gly Ser Val Pro Gly Asn His Met Val  
 355 360 365  
 Gln Gln Gly Asn His Met Val Gln Pro Gly Asn His Met Val Gln Pro  
 370 375 380  
 Val Gln Met Pro Gly Gln Tyr Leu Gln Gln Tyr His His Val Pro Met  
 385 390 395 400  
 Gly Tyr His Gln Pro Gln Thr His Gln Met Ala Gly Pro Gly Gln Val  
 405 410 415  
 Tyr Gly Gly Thr Val Arg Pro Val Met Met Ala Val Asp Gly Met Asn  
 420 425 430  
 Arg Thr Gly Tyr Tyr Gly Met Lys Thr Pro Gly Pro Val Gln Met Tyr  
 435 440 445  
 Gln His His Thr Gly Met Val Val Pro Gly Val Glu Glu Gln Gln Gln  
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 465 470 475

<210> 1245

&lt;211&gt; 1077

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1245

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ttaagtgtta ctttcactaa ctatggtgct gtcatgacct ctcttctcct ccctgacaga      180
catggaaaac aagacgatgt tgttcttgga ttgatactg ttgatggta caagaatgat      240
acaacatatt ttggagcaat tgtgggaaga gtggctaata gaataggagg tgctaaattc      300
aagttaaatg gtcattctta caaaaccgat cccaacgaag gccgtaacac tctccatggt      360
ggttcaaagg gatttagtga tgtgatttgg tcagtccaaa agtatgttcc cactagtcac      420
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aaagtgcagt acatgttgat cggagaaaac aaactcggtg taaaatgga agcaaagcca      540
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aactcgggga acatctcttc ccacaaaatt caactcctcg ccggaanaat cactccggtc      660
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ctcgagccac gtgagatcgg tagccggatc cacgaattac ccggcggtta cgacatcaat      780
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tgtttgga ctcaaggctt cccagattcc gtcaatcaca agaactttcc gtcgcagatt      1020
gttaatcccg gcgagagtta ttgcatgtt atgctcttca gattcactgc tcactaa      1077

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&lt;210&gt; 1246

&lt;211&gt; 358

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1246

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Met Val Lys Lys Gln Ser Pro Leu His Val Val Gly Val Ser Val Leu
1      5      10      15

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Met Val Leu Leu Cys Ser Val Asn Tyr Ser Leu Cys Glu Lys Ile Lys
Page 1945

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Thr Tyr Lys Leu Thr Arg Gly Ser Leu Ser Val Thr Phe Thr Asn Tyr  
35 40  
Gly Ala Val Met Thr Ser Leu Leu Leu Pro Asp Arg His Gly Lys Gln  
50 55 60  
Asp Asp Val Val Leu Gly Phe Asp Thr Val Asp Gly Tyr Lys Asn Asp  
65 70 75 80  
Thr Thr Tyr Phe Gly Ala Ile Val Gly Arg Val Ala Asn Arg Ile Gly  
85 90 95  
Gly Ala Lys Phe Lys Leu Asn Gly His Leu Tyr Lys Thr Asp Pro Asn  
100 105 110  
Glu Gly Arg Asn Thr Leu His Gly Gly Ser Lys Gly Phe Ser Asp Val  
115 120 125  
Ile Trp Ser Val Gln Lys Tyr Val Pro Thr Ser His Ile Thr Phe Thr  
130 135 140  
Tyr Asp Ser Phe Asp Gly Glu Glu Gly Phe Pro Gly Asn Val Thr Val  
145 150 155 160  
Lys Val Thr Tyr Met Leu Ile Gly Glu Asn Lys Leu Gly Val Lys Met  
165 170 175  
Glu Ala Lys Pro Leu Asn Lys Pro Thr Pro Ile Asn Leu Ala Leu His  
180 185 190  
Thr Tyr Trp Asn Leu His Ser His Asn Ser Gly Asn Ile Leu Ser His  
195 200 205  
Lys Ile Gln Leu Leu Ala Gly Lys Ile Thr Pro Val Asp Asp Lys Leu  
210 215 220  
Ile Pro Thr Gly Glu Ile Thr Ser Ile Thr Gly Thr Pro Tyr Asp Phe  
225 230 235 240  
Leu Glu Pro Arg Glu Ile Gly Ser Arg Ile His Glu Leu Pro Gly Gly  
245 250 255  
Tyr Asp Ile Asn Tyr Val Ile Asp Gly Pro Ile Gly Lys His Leu Arg  
260 265 270



Lys Thr Ala Val Val Thr Glu Gln Val Thr Gly Arg Lys Met Glu Leu  
 275 280 285

Trp Thr Asn Gln Pro Gly Val Gln Phe Tyr Thr Ser Asn Met Met Lys  
 290 295 300

Arg Val Val Gly Lys Gly Lys Ala Val Tyr Glu Lys Tyr Gly Gly Leu  
 305 310 315 320

Cys Leu Glu Thr Gln Gly Phe Pro Asp Ser Val Asn His Lys Asn Phe  
 325 330 335

Pro Ser Gln Ile Val Asn Pro Gly Glu Ser Tyr Leu His Val Met Leu  
 340 345 350

Phe Arg Phe Thr Ala His  
 355

<210> 1247

<211> 975

<212> DNA

<213> Arabidopsis thaliana

<400> 1247

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<211> 324

<212> PRT

<213> Arabidopsis thaliana

<400> 1248

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Val His Ala Thr Val Lys Asn Leu Gln Asp Glu Lys Glu Thr Lys His  
 35 40 45

Leu Glu Gly Leu Glu Gly Ala Ala Thr Arg Leu His Leu Phe Glu Met  
 50 55 60

Asp Leu Leu Gln Tyr Asp Thr Val Ser Ala Ala Ile Asn Gly Cys Ser  
 65 70 75 80

Gly Val Phe His Leu Ala Ser Pro Cys Ile Val Asp Glu Val Gln Asp  
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Pro Gln Lys Gln Leu Leu Asp Pro Ala Val Lys Gly Thr Ile Asn Val  
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Leu Thr Ala Ala Lys Glu Ala Ser Val Lys Arg Val Val Val Thr Ser  
 115 120 125

Ser Ile Ser Ala Ile Thr Pro Ser Pro Asn Trp Pro Ala Asp Lys Ile  
 130 135 140

Lys Asn Glu Glu Cys Trp Ala Ala Glu Asp Tyr Cys Arg Gln Asn Gly  
 145 150 155 160

Leu Trp Tyr Pro Leu Ser Lys Thr Leu Ala Glu Lys Ala Ala Trp Glu  
 165 170 175

Phe Ala Glu Glu Lys Gly Leu Asp Val Val Val Val Asn Pro Gly Thr  
 180 185 190

Val Met Gly Pro Val Ile Pro Pro Ser Leu Asn Ala Ser Met His Met  
 195 200 205

Leu Leu Arg Leu Leu Gln Gly Cys Thr Glu Thr Tyr Glu Asn Phe Phe  
 210 215 220

Met Gly Ser Val His Phe Lys Asp Val Ala Leu Ala His Ile Leu Val  
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Tyr Glu Asp Pro Tyr Ser Lys Gly Arg His Leu Cys Val Glu Ala Ile  
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Ser His Tyr Gly Asp Phe Val Ala Lys Val Ala Glu Leu Tyr Pro Asn  
 260 265 270

Tyr Asn Val Pro Lys Leu Pro Arg Glu Thr Gln Pro Gly Leu Leu Arg  
 275 280 285

Asp Lys Asn Ala Ser Lys Lys Leu Ile Asp Leu Gly Leu Lys Phe Ile  
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<211> 1491

<212> DNA

<213> Arabidopsis thaliana

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<211> 496

<212> PRT

<213> *Arabidopsis thaliana*

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 35 40 45

Ala Cys Thr Gln Glu Glu Val Asn Ala Val Met Glu Leu Ala Lys Ser  
50 55 60

Ala Gln Lys Ser Trp Ala Lys Thr Pro Leu Trp Lys Arg Ala Glu Leu  
65 70 75 80

Leu His Lys Ala Ala Ala Ile Leu Lys Asp Asn Lys Ala Pro Met Ala  
85 90 95

Glu Ser Leu Val Lys Glu Ile Ala Lys Pro Ala Lys Asp Ser Val Thr  
100 105 110

Glu Val Val Arg Ser Gly Asp Leu Ile Ser Tyr Cys Ala Glu Glu Gly  
115 120 125

Val Arg Ile Leu Gly Glu Gly Lys Phe Leu Leu Ser Asp Ser Phe Pro  
130 135 140

Gly Asn Asp Arg Thr Lys Tyr Cys Leu Thr Ser Lys Ile Pro Leu Gly  
145 150 155 160

Val Val Leu Ala Ile Pro Pro Phe Asn Tyr Pro Val Asn Leu Ala Val  
165 170 175

Ser Lys Ile Ala Pro Ala Leu Ile Ala Gly Asn Ser Leu Val Leu Lys  
180 185 190

Pro Pro Thr Gln Gly Ala Val Ser Cys Leu His Met Val His Cys Phe  
195 200 205

His Leu Ala Gly Phe Pro Lys Gly Leu Ile Ser Cys Ile Thr Gly Lys  
210 215 220

Gly Ser Glu Ile Gly Asp Phe Leu Thr Met His Pro Ala Val Asn Cys  
225 230 235 240

Ile Ser Phe Thr Gly Gly Asp Thr Gly Ile Ser Ile Ser Lys Lys Ala  
245 250 255

Gly Met Ile Pro Leu Gln Met Glu Leu Gly Gly Lys Asp Ala Cys Ile  
260 265 270

Val Leu Asp Asp Ala Asp Leu Asp Leu Val Ala Ser Asn Ile Ile Lys  
275 280 285

Gly Gly Phe Ser Tyr Ser Gly Gln Arg Cys Thr Ala Val Lys Val Val  
290 295 300

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Leu Val Met Glu Ser Val Ala Asp Glu Leu Val Glu Lys Val Lys Ala  
305 310 315 320

Lys Val Ala Lys Leu Thr Val Gly Pro Pro Glu Glu Asn Ser Asp Ile  
325 330 335

Thr Ala Val Val Ser Glu Ser Ser Ala Asn Phe Ile Glu Gly Leu Val  
340 345 350

Met Asp Ala Lys Glu Lys Gly Ala Thr Phe Cys Gln Glu Tyr Lys Arg  
355 360 365

Glu Gly Asn Leu Ile Trp Pro Leu Leu Leu Asp Asn Val Arg Pro Asp  
370 375 380

Met Arg Ile Ala Trp Glu Glu Pro Phe Gly Pro Val Val Pro Val Leu  
385 390 395 400

Arg Ile Asn Ser Val Glu Glu Gly Ile Asn His Cys Asn Ala Ser Asn  
405 410 415

Phe Gly Leu Gln Gly Cys Val Phe Thr Lys Asp Ile Asn Lys Ala Ile  
420 425 430

Leu Ile Ser Asp Ala Met Glu Thr Gly Thr Val Gln Ile Asn Ser Ala  
435 440 445

Pro Ala Arg Gly Pro Asp His Phe Pro Phe Gln Gly Leu Lys Asp Ser  
450 455 460

Gly Ile Gly Ser Gln Gly Val Thr Asn Ser Ile Asn Leu Met Thr Lys  
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<210> 1251

<211> 1914

<212> DNA

<213> Arabidopsis thaliana

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&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1252

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Gly Pro Phe Asn Ile Lys Glu His Val Ile Ile Thr Ile Phe Ala Asn  
 35 40 45

Cys Gly Val Ala Tyr Gly Gly Gly Asp Ala Tyr Ser Ile Gly Ala Ile  
 50 55 60

Thr Val Met Lys Ala Tyr Tyr Lys Gln Ser Leu Ser Phe Ile Cys Gly  
 65 70 75 80

Leu Phe Ile Val Leu Thr Thr Gln Ile Leu Gly Tyr Gly Trp Ala Gly  
 85 90 95

Ile Leu Arg Arg Tyr Leu Val Asp Pro Val Asp Met Trp Trp Pro Ser  
 100 105 110

Asn Leu Ala Gln Val Ser Leu Phe Arg Ala Leu His Glu Lys Glu Asn  
 115 120 125

Lys Ser Lys Gly Leu Thr Arg Met Lys Phe Phe Leu Val Ala Leu Gly  
 130 135 140

Ala Ser Phe Ile Tyr Tyr Ala Leu Pro Gly Tyr Leu Phe Pro Ile Leu  
 145 150 155 160

Thr Phe Ser Ser Trp Val Cys Trp Ala Trp Pro Asn Ser Ile Thr Ala  
 165 170 175

Gln Gln Val Gly Ser Gly Tyr His Gly Leu Gly Val Gly Ala Phe Thr  
 180 185 190

Leu Asp Trp Ala Gly Ile Ser Ala Tyr His Gly Ser Pro Leu Val Ala  
 195 200 205



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Pro Trp Ser Ser Ile Leu Asn Val Gly Val Gly Phe Ile Met Phe Ile  
210 215 220

Tyr Ile Ile Val Pro Val Cys Tyr Trp Lys Phe Asn Thr Phe Asp Ala  
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Arg Lys Phe Pro Ile Ser Ser Asn Gln Leu Phe Thr Thr Ser Gly Gln  
245 250 255

Lys Tyr Asp Thr Thr Lys Ile Leu Thr Pro Gln Phe Asp Leu Asp Ile  
260 265 270

Gly Ala Tyr Asn Asn Tyr Gly Lys Leu Tyr Leu Ser Pro Leu Phe Ala  
275 280 285

Leu Ser Ile Gly Ser Gly Phe Ala Arg Phe Thr Ala Thr Leu Thr His  
290 295 300

Val Ala Leu Phe Asn Gly Arg Asp Ile Trp Lys Gln Thr Trp Ser Ala  
305 310 315 320

Val Asn Thr Thr Lys Leu Asp Ile His Gly Lys Leu Met Gln Ser Tyr  
325 330 335

Lys Lys Val Pro Glu Trp Trp Phe Tyr Ile Leu Leu Ala Gly Ser Val  
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Ala Met Ser Leu Leu Met Ser Phe Val Trp Lys Glu Ser Val Gln Leu  
355 360 365

Pro Trp Trp Gly Met Leu Phe Ala Phe Ala Leu Ala Phe Ile Val Thr  
370 375 380

Leu Pro Ile Gly Val Ile Gln Ala Thr Thr Asn Gln Gln Pro Gly Tyr  
385 390 395 400

Asp Ile Ile Gly Gln Phe Ile Ile Gly Tyr Ile Leu Pro Gly Lys Pro  
405 410 415

Ile Ala Asn Leu Ile Phe Lys Ile Tyr Gly Arg Ile Ser Thr Val His  
420 425 430

Ala Leu Ser Phe Leu Ala Asp Leu Lys Leu Gly His Tyr Met Lys Ile  
435 440 445

Pro Pro Pro Cys Met Tyr Thr Ala Gln Leu Val Gly Thr Val Val Ala  
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Gly Val Val Asn Leu Gly Val Ala Trp Trp Met Leu Glu Ser Ile Gln  
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Asp Ile Cys Asp Ile Glu Gly Asp His Pro Asn Ser Pro Trp Thr Cys  
485 490 495

Pro Lys Tyr Arg Val Thr Phe Asp Ala Ser Val Ile Trp Gly Leu Ile  
500 505 510

Gly Pro Arg Arg Leu Phe Gly Pro Gly Gly Met Tyr Arg Asn Leu Val  
515 520 525

Gly Phe Phe Leu Ile Gly Ala Val Leu Pro Val Pro Arg Val Gly Ala  
530 535 540

Glu Gln Asp Leu Pro Lys Gln Glu Val Asp Pro Ser His Gln His Ser  
545 550 555 560

Ser Tyr Leu Leu Arg Leu Cys Arg Asp Ala Ser Ser His Ser Asn Gln  
565 570 575

His Cys Gln Leu Val Gly His Arg Asn His Leu Gln Leu Leu Cys Val  
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Gln Leu Pro Gln Glu Met Val Ala Glu Val Gln Leu Arg Thr Leu Cys  
595 600 605

Ser Ala Arg Cys Arg Asp Arg Val His Gly Gly Ala Leu Val Leu Arg  
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<212> DNA

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&lt;210&gt; 1254

&lt;211&gt; 1029

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1254

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Asn Phe Ile Asp Asp Tyr Ala Glu Glu Asp Ser Gln Glu Glu Asp Asp  
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 Glu Asp Leu Glu Arg Arg Ile Gln Glu Arg Phe Ser Ser Arg His His  
 145 150 155 160  
 Glu Glu Tyr Asp Glu Glu Ala Thr Glu Val Glu Gln Gln Ala Leu Leu  
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 Pro Ser Val Arg Asp Pro Lys Leu Trp Met Val Lys Cys Ala Ile Gly  
 180 185 190  
 Arg Glu Arg Glu Val Ala Val Cys Leu Met Gln Lys Phe Ile Asp Arg  
 195 200 205  
 Gly Ala Asp Leu Gln Ile Arg Ser Val Val Ala Leu Asp His Leu Lys  
 210 215 220  
 Asn Phe Ile Tyr Val Glu Ala Asp Lys Glu Ala His Val Lys Glu Ala  
 225 230 235 240  
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 Pro Ile Arg Glu Met Thr Asp Val Leu Ser Val Glu Ser Lys Ala Ile  
 260 265 270  
 Asp Leu Ser Arg Asp Thr Trp Val Arg Met Lys Ile Gly Thr Tyr Lys  
 275 280 285  
 Gly Asp Leu Ala Lys Val Val Asp Val Asp Asn Val Arg Gln Arg Val  
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 Page 1961

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Thr Pro Gly Gln Pro Met Thr Pro Ser Ser Ala Ser Tyr Leu Pro Gly  
885 890 895

Thr Pro Gly Gly Gln Pro Met Thr Pro Gly Thr Gly Leu Asp Val Met  
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Ser Pro Val Ile Gly Gly Asp Ala Glu Ala Trp Phe Met Pro Asp Ile  
915 920 925

Leu Val Asp Ile His Lys Ala Gly Glu Asp Thr Asp Val Gly Val Ile  
930 935 940

Arg Asp Val Ser Asp Gly Thr Cys Lys Val Ser Leu Gly Ser Ser Gly  
945 950 955 960

Glu Gly Asp Thr Ile Met Ala Leu Pro Ser Glu Leu Glu Ile Ile Pro  
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Pro Arg Lys Ser Asp Arg Val Lys Ile Val Gly Gly Gln Tyr Arg Gly  
980 985 990

Ser Thr Gly Lys Leu Ile Gly Ile Asp Gly Ser Asp Gly Ile Val Lys  
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<211> 486

<212> DNA

<213> Arabidopsis thaliana



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<211> 161

<212> PRT

<213> Arabidopsis thaliana

<400> 1256

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Gly Asn Gly Phe Ile Asp Leu Asp Glu Phe Val Ala Leu Phe Gln Ile  
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Gly Ile Gly Gly Gly Asn Asn Arg Asn Asp Val Ser Asp Leu Lys  
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Glu Ala Phe Glu Leu Tyr Asp Leu Asp Gly Asn Gly Arg Ile Ser Ala  
 100 105 110

Lys Glu Leu His Ser Val Met Lys Asn Leu Gly Glu Lys Cys Ser Val  
 Page 1963

Gln Asp Cys Lys Lys Met Ile Ser Lys Val Asp Ile Asp Gly Asp Gly  
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<210> 1258

<211> 250

<212> PRT

<213> Arabidopsis thaliana

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35     40     45
Lys Ser Thr Pro Lys Leu Gln Asp Ser Arg Ser Ala Arg Lys Ile Val
50     55     60
Ser Leu Asp Asn His Ile Ala Leu Ala Cys Ala Gly Leu Lys Ala Asp
65     70     75     80
Ala Arg Val Leu Ile Asn Lys Ala Arg Ile Glu Cys Gln Ser His Arg
85     90     95
Leu Thr Leu Glu Asp Pro Val Thr Val Glu Tyr Ile Thr Arg Tyr Ile
100    105    110
Ala Gly Leu Gln Gln Lys Tyr Thr Gln Ser Gly Gly Val Arg Pro Phe
115    120    125
Gly Leu Ser Thr Leu Ile Val Gly Phe Asp Pro Tyr Ser Arg Leu Pro
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Ser Leu Tyr Gln Thr Asp Pro Ser Gly Thr Phe Ser Ala Trp Lys Ala
145    150    155    160
Asn Ala Thr Gly Arg Asn Ser Asn Ser Ile Arg Glu Phe Leu Glu Lys
165    170    175
Asn Tyr Lys Glu Ser Ser Gly Gln Glu Thr Ile Lys Leu Ala Ile Arg
180    185    190
Ala Leu Leu Glu Val Val Glu Ser Gly Gly Lys Asn Ile Glu Val Ala
195    200    205
Val Met Thr Arg Glu Glu Thr Gly Leu Arg Gln Leu Glu Glu Ala Glu
210    215    220
Ile Asp Ala Ile Val Ala Lys Ile Glu Ala Glu Lys Ala Ala Ala Glu
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&lt;210&gt; 1259

&lt;211&gt; 2766

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1259

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<212> PRT

<213> Arabidopsis thaliana

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 Page 1967

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Tyr Val Ser Asp Gly Tyr Glu Ala Val Val Arg His Asp Pro Phe Glu  
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&lt;213&gt; Arabidopsis thaliana

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<213> *Arabidopsis thaliana*

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Ile Lys Met Met Glu Gly Ile Val Ala Thr Ser Tyr Ser Pro Gly Asp  
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Lys Phe Phe Ile Asp Pro Tyr Lys Leu Leu Pro Leu Ala Arg Phe Leu  
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Pro Gln Pro Lys Gly Gln Ser Thr Gly Gly Arg Gly Gly Ala Gly Arg  
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Gly Arg Gly Asp Ser Arg Gly Arg Gly Arg Gly Gly Ser Phe Ser Arg  
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<211> 918

<212> PRT

<213> Arabidopsis thaliana

<400> 1264

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 Ser His Ser His Ser Pro Leu Ala Ala Ala Ala Ser Ala Ser Ala Pro  
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 Arg Asp Gly Glu Arg Arg Ser Pro Leu Pro Leu Val Tyr Arg Ser Pro  
 115 120 125  
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 130 135 140  
 Pro Val Pro Met Glu Pro Arg Asp Gly Ala Lys Asp Gly Arg Glu Ile  
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 165 170 175  
 Glu Thr Lys Arg Glu Ile Gln Gly Pro Lys Gly Asp Arg Asp Val Lys  
 180 185 190  
 Phe Glu Arg Ser Val Asp Asp Phe Ser Gly Lys Gly Asn Thr Gly Ser  
 195 200 205  
 Tyr Thr Arg Asn Asp Gly Arg Glu Met Tyr Gly Glu Thr Lys Arg Glu  
 210 215 220  
 Ile Gln Gly Pro Lys Ser Asp Arg Asp Ala Lys Phe Glu Arg Pro Gly  
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 Asp Asp Phe Ser Gly Lys Ser Asn Ala Gly Ser Tyr Thr Arg Asp Thr  
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Lys Phe Asp Arg Glu Asn Gln Asn Tyr Asn Glu Gln Lys Gly Glu Ile  
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 Lys Met Glu Lys Glu Gly His Ala His Leu Ala Trp Lys Glu Gln Lys  
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 Asp Tyr His Arg Gly Lys Arg Val Ala Glu Gly Ser Thr Ala Asn Val  
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 Gly Pro Lys Asp Leu Ser Ala Pro Val Glu Gly Ser His Leu Glu Gly  
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 Gly Asp Arg Asp Lys Asp Arg Asn Asp Arg Arg Val Ser Val Leu Val  
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 Ser Asp Arg Trp Glu Arg Glu Arg Met Glu Gln Lys Asp Arg Glu Arg  
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 420 425 430  
 Ala Glu Lys Glu Ile Ser Gln Asn Glu Lys Glu Leu Gly Glu Ala Ser  
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 450 455 460  
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 Ser Arg Ile Ser Glu Lys Glu Ser Glu Asp Gly Cys Leu Glu Gly Glu  
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Gly Ala Thr Glu Arg Glu Lys Asp Ala Phe Asn Tyr Gly Val Gln Gln  
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Arg Lys Arg Ala Leu Arg Pro Arg Gly Ser Pro Gln Thr Thr Asn Arg  
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Asp Asn Val Arg Ser Arg Ser Gln Asp Asn Glu Gly Val Gln Gly Lys  
545 550 555 560

Ser Glu Val Ser Ile Val Val Tyr Lys Val Gly Glu Cys Met Gln Glu  
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Leu Ile Lys Leu Trp Lys Glu Tyr Asp Leu Ser His Pro Asp Lys Ser  
580 585 590

Gly Asp Phe Ala Asn Asn Gly Pro Thr Leu Glu Val Arg Ile Pro Ala  
595 600 605

Glu His Val Thr Ala Thr Asn Arg Gln Val Arg Gly Gly Gln Leu Trp  
610 615 620

Gly Thr Asp Ile Tyr Thr Asp Asp Ser Asp Leu Val Ala Val Leu Met  
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His Thr Gly Tyr Cys Arg Pro Thr Ala Ser Pro Pro Pro Pro Thr Met  
645 650 655

Gln Glu Leu Arg Thr Thr Ile Arg Val Leu Pro Ser Gln Asp Tyr Tyr  
660 665 670

Thr Ser Lys Leu Arg Asn Asn Val Arg Ser Arg Ala Trp Gly Ala Gly  
675 680 685

Ile Gly Cys Ser Tyr Arg Val Glu Arg Cys Tyr Ile Leu Lys Lys Gly  
690 695 700

Gly Gly Thr Ile Glu Leu Glu Pro Ser Leu Thr His Ser Ser Thr Val  
705 710 715 720

Glu Pro Thr Leu Ala Pro Met Ala Val Glu Arg Ser Met Thr Thr Arg  
725 730 735

Ala Ala Ala Ser Asn Ala Leu Arg Gln Gln Arg Phe Val Arg Glu Val  
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Thr Ile Gln Tyr Asn Leu Cys Asn Glu Pro Trp Ile Lys Tyr Ser Ile

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<212> PRT

<213> Arabidopsis thaliana

<400> 1266

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			20					25					30		

Arg	Glu	Ile	Lys	Val	Glu	Cys	Thr	Ile	Pro	Lys	Asp	Asp	Gly	Thr	Leu
		35					40					45			

Ala	Ser	Phe	Val	Gly	Phe	Arg	Val	Gln	His	Asp	Asn	Ala	Arg	Gly	Pro
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Met	Lys	Gly	Gly	Ile	Arg	Tyr	His	Pro	Glu	Val	Asp	Pro	Asp	Glu	Val

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Pro Tyr Gly Gly Ala Lys Gly Gly Ile Gly Cys Asp Pro Ser Lys Leu  
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Ser Ile Ser Glu Leu Glu Arg Leu Thr Arg Val Phe Thr Gln Lys Ile  
115                      120  
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Thr Gly Pro Gln Thr Met Ala Trp Ile Leu Asp Glu Tyr Ser Lys Phe  
145                      150                      155  
His Gly Tyr Ser Pro Ala Val Val Thr Gly Lys Pro Ile Asp Leu Gly  
165                      170                      175  
Gly Ser Leu Gly Arg Asp Ala Ala Thr Gly Arg Gly Val Met Phe Gly  
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Thr Glu Ala Leu Leu Asn Glu His Gly Lys Thr Ile Ser Gly Gln Arg  
195                      200                      205  
Phe Val Ile Gln Gly Phe Gly Asn Val Gly Ser Trp Ala Ala Lys Leu  
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Ile Ser Glu Lys Gly Gly Lys Ile Val Ala Val Ser Asp Ile Thr Gly  
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Thr Lys Glu His Arg Gly Val Lys Gly Phe Asp Gly Ala Asp Pro Ile  
260                      265                      270  
Asp Pro Asn Ser Ile Leu Val Glu Asp Cys Asp Ile Leu Val Pro Ala  
275                      280                      285  
Ala Leu Gly Gly Val Ile Asn Arg Glu Asn Ala Asn Glu Ile Lys Ala  
290                      295                      300  
Lys Phe Ile Ile Glu Ala Ala Asn His Pro Thr Asp Pro Asp Ala Asp  
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Glu Ile Leu Ser Lys Lys Gly Val Val Ile Leu Pro Asp Ile Tyr Ala  
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Gln Gly Phe Met Trp Glu Glu Glu Lys Val Asn Asp Glu Leu Lys Thr  
 355 360 365

Tyr Met Thr Arg Ser Phe Lys Asp Leu Lys Glu Met Cys Lys Thr His  
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Ser Cys Asp Leu Arg Met Gly Ala Phe Thr Leu Gly Val Asn Arg Val  
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<211> 591

<212> DNA

<213> Arabidopsis thaliana

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acaagctctt acaaatcggt gaaatcttcc attgacaaag cctctaagaa gcttgagacg	180
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<211> 196

<212> PRT

<213> Arabidopsis thaliana

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65 70 75 80Asp Arg Val Glu Ser Ser Leu Lys Glu Ser Ser Arg Asp Leu Ser Leu  
85 90 95Phe Lys Phe Lys Ser Gly Ala Val Val Ala Leu Val Leu Phe Val Val  
100 105 110Phe Gly Leu Leu Asn Ser Leu Phe Glu Gly Lys Val Val Ala Lys Leu  
115 120 125Pro Phe His Pro Ile Thr Ile Val Arg Lys Met Ser His Arg Gly Leu  
130 135 140Lys Gly Asp Asp Ser Thr Asp Cys Ser Met Ala Phe Leu Tyr Leu Leu  
145 150 155 160Cys Ser Ile Ser Ile Arg Thr Asn Leu Gln Lys Phe Leu Gly Phe Ser  
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&lt;210&gt; 1269

&lt;211&gt; 2496

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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<211> 831

<212> PRT

<213> *Arabidopsis thaliana*

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Val Ile Thr Lys Leu Leu Tyr Leu Leu Asn Gln Gly Glu Ser Phe Thr  
50 55 60

Lys Val Glu Ala Thr Glu Val Phe Phe Ser Val Thr Lys Leu Phe Gln  
65 70 75 80

Ser Lys Asp Thr Gly Leu Arg Arg Met Val Tyr Leu Ile Ile Lys Glu  
85 90 95

Leu Ser Pro Ser Ser Asp Glu Val Ile Ile Val Thr Ser Ser Leu Met  
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 Lys Asp Met Asn Ser Lys Ile Asp Met Tyr Arg Ala Asn Ala Ile Arg  
 115 120 125  
 Val Leu Cys Arg Ile Ile Asp Gly Thr Leu Leu Thr Gln Ile Glu Arg  
 130 135 140  
 Tyr Leu Lys Gln Ala Ile Val Asp Lys Asn Pro Val Val Ser Ser Ala  
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 Ala Leu Val Ser Gly Leu His Leu Leu Lys Thr Asn Pro Glu Ile Val  
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 Lys Arg Trp Ser Asn Glu Val Gln Glu Gly Ile Gln Ser Arg Ser Ala  
 180 185 190  
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 260 265 270  
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 275 280 285  
 Pro Val Leu Arg Phe Ala Ala Val Arg Thr Leu Asn Lys Val Ala Met  
 290 295 300  
 Thr His Pro Met Ala Val Thr Asn Cys Asn Ile Asp Met Glu Ser Leu  
 305 310 315 320  
 Ile Ser Asp Gln Asn Arg Ser Ile Ala Thr Leu Ala Ile Thr Thr Leu  
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 Leu Lys Thr Gly Asn Glu Ser Ser Val Glu Arg Leu Met Lys Gln Ile  
 340 345 350

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Thr Asn Phe Met Ser Asp Ile Ala Asp Glu Phe Lys Ile Val Val Val  
355 360

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370 375 380

Leu Met Thr Phe Leu Ser Asn Ile Leu Arg Glu Glu Gly Gly Phe Glu  
385 390 395 400

Tyr Lys Arg Ala Ile Val Asp Ser Ile Val Thr Ile Ile Arg Asp Ile  
405 410 415

Pro Asp Ala Lys Glu Ser Gly Leu Leu His Leu Cys Glu Phe Ile Glu  
420 425 430

Asp Cys Glu Phe Thr Tyr Leu Ser Thr Gln Ile Leu His Phe Leu Gly  
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Ile Glu Gly Pro Asn Thr Ser Asp Pro Ser Lys Tyr Ile Arg Tyr Ile  
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Tyr Asn Arg Val His Leu Glu Asn Ala Thr Val Arg Ala Ala Ala Val  
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Ser Thr Leu Ala Lys Phe Gly Phe Met Val Glu Ser Leu Lys Pro Arg  
485 490 495

Ile Thr Val Leu Leu Lys Arg Cys Ile Tyr Asp Ser Asp Asp Glu Val  
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Arg Asp Arg Ala Thr Leu Tyr Leu Ser Glu Pro Ser Glu Glu Ala Phe  
515 520 525

Asp Ile Asn Ser Val Pro Lys Glu Val Lys Ser Gln Pro Leu Ala Glu  
530 535 540

Lys Lys Ala Gln Gly Lys Lys Pro Thr Gly Leu Gly Ala Pro Pro Ala  
545 550 555 560

Ala Pro Ala Ser Gly Phe Asp Gly Tyr Glu Arg Leu Leu Ser Ser Ile  
565 570 575

Pro Glu Phe Ala Ala Phe Gly Lys Leu Phe Lys Ser Ser Leu Pro Val  
580 585 590

Glu Leu Thr Glu Ala Glu Thr Glu Tyr Ala Val Asn Val Val Lys His  
595 600 605



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Pro Glu Gln Leu Leu Glu Arg Val Leu Asn Ile Glu Ala Glu Glu Phe  
625 630 635 640

Ser Glu Val Thr Ser Lys Ala Leu Asn Ser Leu Pro Tyr Asp Ser Pro  
645 650 655

Gly Gln Ala Phe Val Val Phe Glu Lys Pro Ala Gly Val Pro Ala Val  
660 665 670

Gly Lys Phe Ser Asn Thr Leu Thr Phe Val Val Lys Glu Val His Val  
675 680 685

Asp Pro Ser Thr Gly Glu Ala Glu Asp Asp Gly Val Glu Asp Glu Tyr  
690 695 700

Gln Leu Glu Asp Leu Glu Val Val Ala Gly Asp Tyr Met Val Lys Val  
705 710 715 720

Gly Val Ser Asn Phe Arg Asn Ala Trp Glu Ser Met Asp Glu Glu Asp  
725 730 735

Glu Arg Val Asp Glu Tyr Gly Leu Gly Gln Arg Glu Ser Leu Gly Glu  
740 745 750

Ala Val Lys Ala Val Met Asp Leu Leu Gly Met Gln Thr Cys Glu Gly  
755 760 765

Thr Glu Thr Ile Pro Leu Asn Ala Arg Ser His Thr Cys Leu Leu Ser  
770 775 780

Gly Val Tyr Ile Gly Asn Val Lys Val Leu Val Arg Ala Gln Phe Gly  
785 790 795 800

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<211> 1059

<212> DNA

<213> *Arabidopsis thaliana*

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aaagtatcag cttcttcttc tcagtttcta tccttcaggc caactcaaga agatagacat    180
agaaagtctg gaaattatca tcttcctcac tctggttcct tcatgccatc atcagtagct    240
gatgtttatg attcaacccg caaagctcct tacagttctg tacaggaggat gaggatgttc    300
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&lt;210&gt; 1272

&lt;211&gt; 352

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1272

Met Glu Arg Asp Phe Leu Gly Leu Gly Ser Lys Asn Ser Pro Ile Thr  
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Val Lys Glu Glu Thr Ser Glu Ser Ser Arg Asp Ser Ala Pro Asn Arg  
 20 25 30

Gly Met Asn Trp Ser Phe Ser Asn Lys Val Ser Ala Ser Ser Ser Gln  
 35 40 45  
 Phe Leu Ser Phe Arg Pro Thr Gln Glu Asp Arg His Arg Lys Ser Gly  
 50 55 60  
 Asn Tyr His Leu Pro His Ser Gly Ser Phe Met Pro Ser Ser Val Ala  
 65 70 75 80  
 Asp Val Tyr Asp Ser Thr Arg Lys Ala Pro Tyr Ser Ser Val Gln Gly  
 85 90 95  
 Val Arg Met Phe Pro Asn Ser Asn Gln His Glu Glu Thr Asn Ala Val  
 100 105 110  
 Ser Met Ser Met Pro Gly Phe Gln Ser His His Tyr Ala Pro Gly Gly  
 115 120 125  
 Arg Ser Phe Met Asn Asn Asn Asn Ser Gln Pro Leu Val Gly Val  
 130 135 140  
 Pro Ile Met Ala Pro Pro Ile Ser Ile Leu Pro Pro Pro Gly Ser Ile  
 145 150 155 160  
 Val Gly Thr Thr Asp Ile Arg Ser Ser Ser Lys Pro Ile Gly Ser Pro  
 165 170 175  
 Ala Gln Leu Thr Ile Phe Tyr Ala Gly Ser Val Cys Val Tyr Asp Asp  
 180 185 190  
 Ile Ser Pro Glu Lys Ala Lys Ala Ile Met Leu Leu Ala Gly Asn Gly  
 195 200 205  
 Ser Ser Met Pro Gln Val Phe Ser Pro Pro Gln Thr His Gln Gln Val  
 210 215 220  
 Val His His Thr Arg Ala Ser Val Asp Ser Ser Ala Met Pro Pro Ser  
 225 230 235 240  
 Phe Met Pro Thr Ile Ser Tyr Leu Ser Pro Glu Ala Gly Ser Ser Thr  
 245 250 255  
 Asn Gly Leu Gly Ala Thr Lys Ala Thr Arg Gly Leu Thr Ser Thr Tyr  
 260 265 270  
 His Asn Asn Gln Ala Asn Gly Ser Asn Ile Asn Cys Pro Val Pro Val  
 275 280 285

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Ser Cys Ser Thr Asn Val Met Ala Pro Thr Val Ala Leu Pro Leu Ala  
290 295 300

Arg Lys Ala Ser Leu Ala Arg Phe Leu Glu Lys Arg Lys Glu Arg Val  
305 310 315 320

Thr Ser Val Ser Pro Tyr Cys Leu Asp Lys Lys Ser Ser Thr Asp Cys  
325 330 335

Arg Arg Ser Met Ser Glu Cys Ile Ser Ser Ser Leu Ser Ser Ala Thr  
340 345 350

<210> 1273

<211> 588

<212> DNA

<213> Arabidopsis thaliana

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tctacttggt tacagaaacg tgttgagaat ggtaaaaatt ggaataagat taggagttgt 180  
cttgtggaga gcaaagtttg ttctaagctt gaagccaagt ttgttaatgt tcctgtcaat 240  
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tgtgtttctg agtacgtaaa cccaacaacc tggaccaaga acacaacggg aacacacact 360  
aatccagact gccaaacctg ggacaacgca aaagaaaagc tctgcttcga ttgtcaatct 420  
tgtaaagcgg gtctactcga caacgtcaaa agcgcttgga agaaagtgtc aatcgtaac 480  
atcgctctcc ttgtcttctc catcattgtc tactctgttg gttgctgtgc tttcaggaac 540  
aacaagaggg atgacagtta ttcccgtagc tacggatata agccttga 588

<210> 1274

<211> 195

<212> PRT

<213> Arabidopsis thaliana

<400> 1274

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20 25 30

Lys Glu Tyr Lys Leu Gly Asp Tyr Ser Thr Trp Leu Gln Lys Arg Val  
35 40 45

Glu Asn Gly Lys Asn Trp Asn Lys Ile Arg Ser Cys Leu Val Glu Ser  
50 55 60

Lys Val Cys Ser Lys Leu Glu Ala Lys Phe Val Asn Val Pro Val Asn  
65 70 75 80

Ser Phe Tyr Lys Glu His Leu Thr Ala Leu Gln Ser Gly Cys Cys Lys  
85 90 95

Pro Ser Asp Glu Cys Gly Phe Glu Tyr Val Asn Pro Thr Thr Trp Thr  
100 105 110

Lys Asn Thr Thr Gly Thr His Thr Asn Pro Asp Cys Gln Thr Trp Asp  
115 120 125

Asn Ala Lys Glu Lys Leu Cys Phe Asp Cys Gln Ser Cys Lys Ala Gly  
130 135 140

Leu Leu Asp Asn Val Lys Ser Ala Trp Lys Lys Val Ala Ile Val Asn  
145 150 155 160

Ile Val Phe Leu Val Phe Leu Ile Ile Val Tyr Ser Val Gly Cys Cys  
165 170 175

Ala Phe Arg Asn Asn Lys Arg Asp Asp Ser Tyr Ser Arg Thr Tyr Gly  
180 185 190

Tyr Lys Pro  
195

<210> 1275

<211> 1530

<212> DNA

<213> Arabidopsis thaliana

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tggcgtgtaa agttcaaaag agagagtggag cgaagggaac tgggggaact ctcacagtgg	300
catgcacctg atggtagcct ttgcccctct gctgttgata ttaaaccgaa gatggaaatg	360
ttaccgggta agcaagaagg ttactcagat ggtccagccc cgctaaaact tgggaataagg	420
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gattctgatg acgagaatga tttagtgatc actccagggc ctgcatacag tggttgtcaa	780
acagatgggtg gacttacttt tccactgaac cctcctggaa taattaactc atataatgag	840
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&lt;210&gt; 1276

&lt;211&gt; 509

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1276

Met Ser Gly Ser Arg Ile Lys Val Ala Gly Arg Phe Leu Pro Cys Val  
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 His Met Gly Cys Phe Asp Leu Asp Val Phe Val Glu Leu Asn Gln Arg  
 20 25 30  
 Ser Arg Lys Trp Gln Cys Pro Ile Cys Leu Lys Asn Tyr Ser Val Glu  
 35 40 45  
 His Val Ile Val Asp Pro Tyr Phe Asn Arg Ile Thr Ser Lys Met Lys  
 50 55 60  
 His Cys Asp Glu Glu Val Thr Glu Ile Glu Val Lys Pro Asp Gly Ser  
 65 70 75 80  
 Trp Arg Val Lys Phe Lys Arg Glu Ser Glu Arg Arg Glu Leu Gly Glu  
 85 90 95  
 Leu Ser Gln Trp His Ala Pro Asp Gly Ser Leu Cys Pro Ser Ala Val  
 100 105 110  
 Asp Ile Lys Arg Lys Met Glu Met Leu Pro Val Lys Gln Glu Gly Tyr  
 115 120 125  
 Ser Asp Gly Pro Ala Pro Leu Lys Leu Gly Ile Arg Lys Asn Arg Asn  
 130 135 140  
 Gly Ile Trp Glu Val Ser Lys Pro Asn Thr Asn Gly Leu Ser Ser Ser  
 145 150 155 160  
 Asn Arg Gln Glu Lys Val Gly Tyr Gln Glu Lys Asn Ile Ile Pro Met  
 165 170 175  
 Ser Ser Ser Ala Thr Gly Ser Gly Arg Asp Gly Asp Asp Ala Ser Val  
 180 185 190  
 Asn Gln Asp Ala Ile Gly Thr Phe Asp Phe Val Ala Asn Gly Met Glu  
 195 200 205  
 Leu Asp Ser Ile Ser Met Asn Val Asp Ser Gly Tyr Asn Phe Pro Asp  
 210 215 220  
 Arg Asn Gln Ser Gly Glu Gly Gly Asn Asn Glu Val Ile Val Leu Ser  
 225 230 235 240  
 Asp Ser Asp Asp Glu Asn Asp Leu Val Ile Thr Pro Gly Pro Ala Tyr  
 245 250 255

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Ser Gly Cys Gln Thr Asp Gly Gly Leu Thr Phe Pro Leu Asn Pro Pro  
260 265 270

Gly Ile Ile Asn Ser Tyr Asn Glu Asp Pro His Ser Ile Ala Gly Gly  
275 280 285

Ser Ser Gly Leu Gly Leu Phe Asn Asp Asp Asp Glu Phe Asp Thr Pro  
290 295 300

Leu Trp Ser Phe Pro Ser Glu Thr Pro Glu Ala Pro Gly Phe Gln Leu  
305 310 315 320

Phe Arg Ser Asp Ala Asp Val Ser Gly Gly Leu Val Gly Leu His His  
325 330 335

His Ser Pro Leu Asn Cys Ser Pro Glu Ile Asn Gly Gly Tyr Thr Met  
340 345 350

Ala Pro Glu Thr Ser Met Ala Ser Val Pro Val Val Pro Gly Ser Thr  
355 360 365

Gly Arg Ser Glu Ala Asn Asp Gly Leu Val Asp Asn Pro Leu Ala Phe  
370 375 380

Gly Arg Asp Asp Pro Ser Leu Gln Ile Phe Leu Pro Thr Lys Pro Asp  
385 390 395 400

Ala Ser Ala Gln Ser Gly Phe Lys Asn Gln Ala Asp Met Ser Asn Gly  
405 410 415

Leu Arg Ser Glu Asp Trp Ile Ser Leu Arg Leu Gly Asp Ser Ala Ser  
420 425 430

Gly Asn His Gly Asp Pro Ala Thr Thr Asn Gly Ile Asn Ser Ser His  
435 440 445

Gln Met Ser Thr Arg Glu Gly Ser Met Asp Thr Thr Thr Glu Thr Ala  
450 455 460

Ser Leu Leu Leu Gly Met Asn Asp Ser Arg Gln Asp Lys Ala Lys Lys  
465 470 475 480

Gln Arg Ser Asp Asn Pro Phe Ser Phe Pro Arg Gln Lys Arg Ser Val  
485 490 495

Arg Pro Arg Met Tyr Leu Ser Ile Asp Ser Asp Ser Glu  
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&lt;210&gt; 1277

&lt;211&gt; 2643

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1277

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gaattatacg cgaagagctgg ttcgacctac gagcaaatct ttaaagcaa tctccaacac      180
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 taa 2643

&lt;210&gt; 1278

&lt;211&gt; 880

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1278

Met Glu Ala Asn Ser Ala Asp Gln Lys Gln Lys Pro Asn Phe Leu Val  
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Glu Val Asn Asn Ile Glu Lys Gln Leu Trp Thr Leu Ile His Ser Lys  
 20 25 30

Thr Ile Leu His Thr Asp Val Ser Glu Leu Tyr Ala Lys Ala Gly Ser  
 35 40 45

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Thr Tyr Glu Gln Ile Phe Lys Ser Asn Leu Gln His Glu Glu Leu Gln  
 50 55 60  
 Glu Val Glu Phe Cys Leu Trp Lys Leu His Tyr Lys His Ile Asp Glu  
 65 70 75 80  
 Phe Arg Lys Gly Leu Lys Thr Asn Asp His Ala Lys His Met Lys Ala  
 85 90 95  
 Phe Lys Leu Phe Leu Ser Lys Ala Ala Glu Phe Tyr Gln Asn Leu Ile  
 100 105 110  
 Ser Lys Val Arg Gly Tyr Tyr His Arg Leu Ser Glu Glu Ser Gly Glu  
 115 120 125  
 Gln Lys Ser Arg Phe Leu Cys His Arg Phe Tyr Ile Cys Leu Gly Asp  
 130 135 140  
 Leu Gln Arg Tyr Gln Glu Gln Tyr Leu Lys Ala His Glu His Pro Asn  
 145 150 155 160  
 Trp Ser Thr Ala Ala Thr Tyr Tyr Leu Glu Ala Ala Lys Ser Trp Pro  
 165 170 175  
 Asp Ser Gly Asn Pro His Asn Gln Leu Ala Val Leu Ala Thr Tyr Val  
 180 185 190  
 Ser Asp Glu Leu Leu Ala Leu Tyr His Cys Val Arg Ser Leu Ala Val  
 195 200 205  
 Lys Glu Pro Phe Pro Gly Ala Ser Asn Asn Leu Leu Leu Phe Glu  
 210 215 220  
 Lys Asn Arg Ser Ser Pro Leu Gln Ser Leu Ser Thr Asp Ala Glu Phe  
 225 230 235 240  
 Asn Tyr Leu Asn Pro Ser Glu Lys Lys Val Ser Val Lys Glu Arg Asp  
 245 250 255  
 Leu Ser Lys Ala Lys Gly Glu Leu Val Ala Gly Ile Asp Leu Trp Pro  
 260 265 270  
 Leu Val Val Arg Thr Thr Ser Phe Phe Phe Leu Lys Ser Ser Phe Asp  
 275 280 285  
 Glu Phe Gly Arg Ala Phe Ala Ser Thr Ile Arg Glu Leu Asp Ala Ala  
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295

Phe Ala Ala Asp Asp Arg Asn Leu Glu Ala Met Leu Glu Ser Tyr Gln  
305 310 315 320

Phe Met Asp Thr Ala Arg Lys Gly Pro Tyr Lys Ile Leu Gln Ile Val  
325 330 335

Ala Val Phe Ile Tyr Ile Phe His Asn Leu Ala Glu Ala Asn Gly Ser  
340 345 350

Asp Ile Val Lys Glu Glu Val Lys Leu Thr Asn Leu Ala Leu Thr Met  
355 360 365

Val Phe Ile Val Met Gly Arg Val Val Glu Arg Cys Leu Lys Thr Thr  
370 375 380

Pro Leu Asp Ser Cys Pro Leu Leu Pro Ala Leu Leu Val Phe Leu Asp  
385 390 395 400

Tyr Leu Pro Phe Leu Leu Asp Lys Val Glu Glu Glu Glu Glu Cys  
405 410 415

Arg Phe Asp Glu Lys Ser Lys Ser Ala Ile Ser Tyr Phe Phe Gly Lys  
420 425 430

Leu Val Asp Ile Leu Asn Gln Leu Lys Val Lys Asp Lys Asn Cys Pro  
435 440 445

Ala Lys Thr Leu Leu Ala Leu Trp Glu Asp His Glu Leu Lys Ser Leu  
450 455 460

Ala Pro Leu Ala Pro Ile His Ala Leu Leu Asp Phe Ser Ser Asn Met  
465 470 475 480

Asp Leu Arg Glu Ser Phe Asp Arg Gly Lys Glu Leu Arg Leu Gln Arg  
485 490 495

Ile Ile Ser Ser Ala Ile Asp Ile Thr Thr Arg Gln Lys Lys Gly Ser  
500 505 510

Gln Lys Trp Leu Phe Phe Asp Asn Gln Arg Thr His Phe Tyr Thr Thr  
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Ser Gly Glu Leu Gln Ser Asn Gly Glu Leu Phe His Gly Asn Gly Glu  
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Gly Arg Asn Arg Lys Cys Val Thr Ile Gly Pro Val Glu Ile Ile Pro  
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Leu Glu Asn Glu Arg Ser Val Pro Val Glu Glu Glu Glu Val Ile Leu  
565 570 575

Leu Lys Pro Leu Val Arg Cys Gln Ser Ala Pro Ile Tyr Ser Ser Gly  
580 585 590

Ile Ala Ala Lys Pro Leu Ser Ser Asp Cys Thr Thr Ser Gly Asn Gln  
595 600 605

Thr Thr Thr Ser Asn Asp Ser Leu Arg Arg Thr Leu Ser Leu Ile Gly  
610 615 620

Ser Glu Ser Phe Ser Phe Thr Gln Gly Leu Lys Asp Thr Asp Pro Gln  
625 630 635 640

His Leu His Leu Glu Glu Gly Thr Val Ser Gly Arg Pro Pro Ser Leu  
645 650 655

Ser Ala Trp Val Val Asp Lys Asn Lys Glu Lys Gly Arg Leu Gly Leu  
660 665 670

Ser Lys Pro Asn Gly Leu Gly Pro Ile Asp Glu Thr Gly Pro Val Ser  
675 680 685

Ala Phe Asp Ser Leu Ser Ile Asn Ser Ser Thr Glu His Pro Ala Ser  
690 695 700

Ser Tyr Ser Pro Pro Thr Pro Ser Ala Pro Leu Leu Pro Glu Asp Ala  
705 710 715 720

Ser Trp Phe His Asn Asp Ala Ser Thr Asn Lys Ala Glu Ser Phe Tyr  
725 730 735

Asp Gln Thr Arg Tyr Met Glu Leu Pro Gly Ile Met Lys Pro Tyr Thr  
740 745 750

Asn Pro Pro Phe Val Gly Ile Ser Ser Ser Glu Trp Leu Arg Arg Tyr  
755 760 765

Arg Glu Ser Arg Asn Leu Gly Pro Ala Tyr Ser Tyr Gln Ala Gln Gly  
770 775 780

Thr Asn Asn Leu Arg Asn Phe Met Ala His Gly Ser Ser Lys Phe Ser  
785 790 795 800

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Leu Leu Ala Arg Tyr Gly Thr Pro Asn Asp Ser Ser Gln Asn Ser Thr  
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Phe His Pro Gln Leu Tyr Met Glu Asp His Glu Ser Arg Gly Glu Lys  
820 825 830  
Leu Gly Asn Val Gln Gln Ser Thr Thr Asn Pro Tyr Gly Phe Ser Asp  
835 840  
Asp Pro Gly Pro Phe Leu Arg Phe Leu Arg Glu Lys Glu Trp Leu Asn  
850 855 860  
Glu Asn Gly Gln Arg Leu Arg Gly Pro Pro Ala Tyr Met Asn Asn  
865 870 875 880

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<211> 1143

<212> DNA

<213> Arabidopsis thaliana

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<210> 1280

<211> 380

<212> PRT

<213> Arabidopsis thaliana

<400> 1280

Met Ala Asp Asp Lys Glu Met Pro Ala Ala Val Val Asp Gly His Asp  
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 20 25 30

Glu Pro Lys Gln Thr Ile Ser Tyr Met Ala Glu Arg Val Val Gly Thr  
 35 40 45

Gly Ser Phe Gly Ile Val Phe Gln Ala Lys Cys Leu Glu Thr Gly Glu  
 50 55 60

Thr Val Ala Ile Lys Lys Val Leu Gln Asp Arg Arg Tyr Lys Asn Arg  
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Glu Leu Gln Leu Met Arg Val Met Asp His Pro Asn Val Val Cys Leu  
 85 90 95

Lys His Cys Phe Phe Ser Thr Thr Ser Lys Asp Glu Leu Phe Leu Asn  
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Leu Val Met Glu Tyr Val Pro Glu Ser Leu Tyr Arg Val Leu Lys His  
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Tyr Ser Ser Ala Asn Gln Arg Met Pro Leu Val Tyr Val Lys Leu Tyr  
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Met Tyr Gln Ile Phe Arg Gly Leu Ala Tyr Ile His Asn Val Ala Gly  
 145 150 155 160

Val Cys His Arg Asp Leu Lys Pro Gln Asn Leu Leu Val Asp Pro Leu  
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Thr His Gln Val Lys Ile Cys Asp Phe Gly Ser Ala Lys Gln Leu Val  
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 Lys Gly Glu Ala Asn Ile Ser Tyr Ile Cys Ser Arg Phe Tyr Arg Ala  
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 Pro Glu Leu Ile Phe Gly Ala Thr Glu Tyr Thr Thr Ser Ile Asp Ile  
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 Trp Ser Ala Gly Cys Val Leu Ala Glu Leu Leu Gly Gln Pro Leu  
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 Phe Pro Gly Glu Asn Ala Val Asp Gln Leu Val Glu Ile Ile Lys Val  
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 305 310 315 320  
 His Pro Phe Phe Asp Glu Leu Arg Glu Pro Asn Ala Arg Leu Pro Asn  
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 Gly Arg Pro Phe Pro Pro Leu Phe Asn Phe Lys Gln Glu Val Ala Gly  
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&lt;211&gt; 1272

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana



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Asn Glu Ile Arg Ile Leu Lys Glu Glu Ser Gln Arg Thr Asn Leu Asp  
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50 55 60

Leu Asn Lys Gln Leu Pro Tyr Leu Val Gly Asn Ile Val Glu Ile Leu  
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Glu Met Ser Pro Glu Asp Asp Ala Glu Glu Asp Gly Ala Asn Ile Asp  
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Leu Asp Ser Gln Arg Lys Gly Lys Cys Val Val Leu Lys Thr Ser Thr  
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Arg Gln Thr Ile Phe Leu Pro Val Val Gly Leu Val Asp Pro Asp Thr  
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Leu Lys Pro Gly Asp Leu Val Gly Val Asn Lys Asp Ser Tyr Leu Ile  
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Leu Asp Thr Leu Pro Ser Glu Tyr Asp Ser Arg Val Lys Ala Met Glu  
145 150 155 160

Val Asp Glu Lys Pro Thr Glu Asp Tyr Asn Asp Ile Gly Gly Leu Glu  
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Lys Gln Ile Gln Glu Leu Val Glu Ala Ile Val Leu Pro Met Thr His  
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Lys Glu Gln Phe Glu Lys Leu Gly Ile Arg Pro Pro Lys Gly Val Leu  
195 200 205

Leu Tyr Gly Pro Pro Gly Thr Gly Lys Thr Leu Met Ala Arg Ala Cys  
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Ala Ala Gln Thr Asn Ala Thr Phe Leu Lys Leu Ala Gly Pro Gln Leu  
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Val Gln Met Phe Ile Gly Asp Gly Ala Lys Leu Val Arg Asp Ala Phe  
245 250 255

Leu Leu Ala Lys Glu Lys Ser Pro Cys Ile Ile Phe Ile Asp Glu Ile  
260 265 270

Asp Ala Ile Gly Thr Lys Arg Phe Asp Ser Glu Val Ser Gly Asp Arg  
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Glu Val Gln Arg Thr Met Leu Glu Leu Leu Asn Gln Leu Asp Gly Phe  
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Ser Ser Asp Asp Arg Ile Lys Val Ile Ala Ala Thr Asn Arg Ala Asp  
305 310 315 320

Ile Leu Asp Pro Ala Leu Met Arg Ser Gly Arg Leu Asp Arg Lys Ile  
325 330 335

Glu Phe Pro His Pro Thr Glu Glu Ala Arg Gly Arg Ile Leu Gln Ile  
340 345 350

His Ser Arg Lys Met Asn Val Asn Ala Asp Val Asn Phe Glu Glu Leu  
355 360 365

Ala Arg Ser Thr Asp Asp Phe Asn Gly Ala Gln Leu Lys Ala Val Cys  
370 375 380

Val Glu Ala Gly Met Leu Ala Leu Arg Arg Asp Ala Thr Glu Val Asn  
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&lt;210&gt; 1284

&lt;211&gt; 387

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1284

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Pro Leu Leu Lys Ser Pro Leu Pro Thr Ser Ser Gln Ser Ser Cys Trp
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Phe Cys Asn Ser Leu Pro Lys Thr Gln Phe Pro Lys Leu Arg Leu Ser
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Asn Gly Ser Ser His Gly Leu Arg Ile Gln Ala Leu Leu Arg Asn Glu
50           55           60

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Thr Pro Ser Glu Gly Glu Asp Asn Asn Gly Phe Gly Phe Phe Pro Gly
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115 120 125

Gly Gly Val Gln Asn Ala Thr Ser Ala His Ala Leu Pro Arg Pro Ala  
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Leu Ala Val Arg Asn Leu Leu Glu Gln Ala Arg Phe Ala His Leu Cys  
145 150 155 160

Thr Val Met Ser Lys Met His His Arg Arg Glu Gly Tyr Pro Phe Gly  
165 170 175

Ser Leu Val Asp Phe Ala Pro Asp Arg Met Gly His Pro Ile Phe Leu  
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Phe Ser Pro Leu Ala Ile His Thr Arg Asn Leu Leu Asn Glu Pro Arg  
195 200 205

Cys Ser Leu Val Val Gln Ile Pro Gly Trp Ser Gly Leu Ser Asn Ala  
210 215 220

Arg Val Thr Leu Phe Gly Asp Val Tyr Pro Leu Ser Glu Asp Glu Gln  
225 230 235 240

Glu Trp Ala His Lys Gln Tyr Ile Ala Lys His Pro His Gly Pro Ser  
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Glu Gln Trp Gly Asn Phe His Tyr Phe Arg Met Gln Asn Ile Ser Asp  
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Ile Tyr Phe Ile Gly Gly Phe Gly Thr Val Ala Trp Val Asp Val Lys  
275 280 285

Glu Tyr Glu Gly Leu Gln Pro Asp Lys Ile Ala Val Asp Gly Gly Glu  
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Arg Asn Leu Lys Glu Leu Asn Ala Ile Phe Ser Lys Pro Leu Arg Glu  
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Leu Leu Ser Thr Glu Ser Glu Val Asp Asp Ala Ala Leu Ile Ser Ile  
325 330 335

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Leu Gln Lys  
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<211> 780

<212> PRT

<213> Arabidopsis thaliana

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Leu Arg Leu Gln Leu Val Gln Thr Lys Pro Ser Ser Asp Gly Gly Ser  
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Asp Glu Glu Trp Gly Glu Phe Leu His His Asp Pro Val Arg Arg Ile  
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Tyr Asp Phe Ser Glu Ile Arg Arg Glu Ile Glu Ala Glu Thr Asn Arg  
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Val Ser Gly Glu Asn Lys Gly Val Ser Asp Ile Pro Ile Gly Leu Lys  
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Ile Thr Lys Val Pro Val Gly Asp Gln Pro Ser Asp Ile Glu Ala Arg  
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Leu Ala Val Ser Pro Ala Asn Thr Asp Leu Ala Asn Ser Asp Ala Leu  
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Gln Ile Ala Gly Asn Ala Asp Pro Asp Gly His Arg Thr Ile Gly Val  
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Ile Thr Lys Leu Asp Ile Met Asp Arg Gly Thr Asp Ala Arg Asn His  
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Leu Leu Gly Lys Thr Ile Pro Leu Arg Leu Gly Tyr Val Gly Val Val  
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260 265 270



Leu Val Ala Glu Glu Lys Phe Phe Arg Ser Arg Pro Val Tyr Ser Gly  
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Val Leu Val Gln His Ile Lys Ala Leu Leu Pro Ser Leu Lys Ser Arg  
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Lys Glu Met Ser Thr Ser Glu Leu Ser Gly Gly Ala Arg Ile Leu Tyr  
 370 375 380

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Glu Asp Leu Thr Ala Asp Asp Ile Arg Thr Ala Ile Gln Asn Ala Thr  
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Val Arg Arg Gln Ile Ser Arg Leu Leu Asp Pro Ser Leu Gln Cys Ala  
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Lys Glu Leu Gln Arg Phe Pro Val Leu Gln Lys Arg Met Asp Glu Val  
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Asn Phe Ile Gly Gly Thr Lys Ala Val Glu Gln Ala Met Gln Thr Val  
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&lt;211&gt; 1782

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1287

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<213> Arabidopsis thaliana

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Tyr Thr Leu Asn Glu Asn Gly Asn Asn Asn Gly Val Ser Ser Ala Gln  
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Ile Phe Asp Pro Asp Arg Ser Lys Asn Pro Cys Leu Thr Asp Asp Ser  
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Tyr Pro Ser Gln Ser Tyr Glu Lys Tyr Phe Leu Asp Ser Pro Thr Asp  
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Glu Phe Val Gln His Pro Ile Gly Ser Gly Ala Ser Val Ser Ser Phe  
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Gly Ser Leu Asp Ser Phe Pro Tyr Gln Ser Arg Pro Val Leu Gly Cys  
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Ser Met Glu Phe Gln Leu Pro Leu Asp Ser Thr Ser Thr Ser Ser Thr  
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Arg Leu Leu Gly Asp Tyr Gln Ala Val Ser Tyr Ser Pro Ser Met Asp  
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Val Val Glu Glu Phe Asp Asp Glu Gln Met Arg Ser Lys Ile Gln Gln  
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Leu Glu Arg Ala Leu Leu Gly Asp Glu Asp Asp Lys Met Val Gly Ile  
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 Glu Gln His Gln Asp Ser Pro Lys Glu Ser Ser Ser Ala Asp Ser Asn  
 195 200 205  
 Ser His Val Ser Ser Lys Glu Val Val Ser Gln Ala Thr Pro Lys Gln  
 210 215 220  
 Ile Leu Ile Ser Cys Ala Arg Ala Leu Ser Glu Gly Lys Leu Glu Glu  
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 Ala Leu Ser Met Val Asn Glu Leu Arg Gln Ile Val Ser Ile Gln Gly  
 245 250 255  
 Asp Pro Ser Gln Arg Ile Ala Ala Tyr Met Val Glu Gly Leu Ala Ala  
 260 265 270  
 Arg Met Ala Ala Ser Gly Lys Phe Ile Tyr Arg Ala Leu Lys Cys Lys  
 275 280 285  
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 Val Cys Pro Cys Phe Lys Phe Gly Phe Leu Ala Ala Asn Gly Ala Ile  
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 Glu Ser Val Gln Arg Ser Ile Gly Gly Leu Arg Ile Ile Gly Leu Arg  
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Pro Gly Glu Thr Leu Ile Val Asn Phe Ala Phe Gln Leu His His Met  
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Pro Asp Glu Ser Val Thr Thr Val Asn Gln Arg Asp Glu Leu Leu His  
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Val Asn Thr Asn Thr Ser Pro Phe Phe Pro Arg Phe Ile Glu Ala Tyr  
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Glu Tyr Tyr Ser Ala Val Phe Glu Ser Leu Asp Met Thr Leu Pro Arg  
485 490 495

Glu Ser Gln Glu Arg Met Asn Val Glu Arg Gln Cys Leu Ala Arg Asp  
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Ile Val Asn Ile Val Ala Cys Glu Gly Glu Glu Arg Ile Glu Arg Tyr  
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Glu Ala Ala Gly Lys Trp Arg Ala Arg Met Met Met Ala Gly Phe Asn  
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Pro Lys Pro Met Ser Ala Lys Val Thr Asn Asn Ile Gln Asn Leu Ile  
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Arg

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<212> DNA

<213> Arabidopsis thaliana

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&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1290

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Ser Leu Leu Glu Ala Leu Glu Lys Ser Ser His Asn Gly Val Glu Ala  
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Leu Asp Leu Lys Thr Leu Lys Lys Leu Val Leu Ser Phe Glu Arg Arg  
50 55 60

Leu Arg Asp Asn Ile Ala Ala Arg Leu Lys Tyr Val Glu Asn Pro Glu  
65 70 75 80

Lys Phe Ala Asp Ser Glu Val Asp Leu His Asp Asp Leu Gln Lys Leu  
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Lys Val Leu Ala Gly Ala Pro Glu Leu Tyr Pro Asp Leu Val Ala Ser  
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Asn Thr Val Pro Ser Ile Val Asn Leu Leu Ser His Glu Asn Ser Asp  
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Ile Ala Asn Asp Val Val Gln Leu Leu Gln Asp Leu Thr Asp Glu Asp  
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Ala Leu Glu Asp Asn Asp Glu Pro Ala Arg Val Leu Val Asp Ala Leu  
145 150 155 160

Val Glu Asn Asn Val Leu Glu Leu Leu Val Gln Asn Met Asn Arg Leu  
165 170 175

Ser Glu Ala Asp Pro Asp Glu Ala Thr Ala Ile Tyr Ala Thr Leu Thr  
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Val Ile Glu Asn Leu Val Glu Val Lys Pro Ala Val Ala Gln Leu Val  
195 200 205

Cys Glu Arg Thr Lys Leu Leu Arg Trp Leu Leu Thr Lys Ile Lys Val  
210 215 220

Arg Glu Phe Glu Gly Ile Lys Gln Tyr Ala Ser Glu Ile Leu Ala Ile  
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Leu Leu Gln Asn Ser Thr Ala Asn Gln Lys Arg Leu Gly Gln Met Asn  
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Gly Val Asp Ala Val Leu Glu Gly Val Ala Met Tyr Lys Ser Lys Asp  
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Pro Lys Thr Pro Asp Glu Glu Glu Met Leu Glu Asn Leu Phe Asp Cys  
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Ala Glu Gly Val Glu Leu Met Ile Ile Ile Met Lys Gln Lys Lys Tyr  
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Ala Tyr Gly Ser Ala Ile Arg Ala Leu Asp Phe Ala Met Thr Asn Tyr  
325 330 335

Pro Pro Ala Cys Glu Arg Phe Val Asp Val Met Gly Leu Lys Thr Ala  
340 345 350

Phe Ala Ala Phe Met Gly Lys Ile Pro Leu Asn Lys Arg Ile Lys Arg  
355 360 365

Glu Arg Tyr Lys Glu Glu Leu Glu Glu Arg Val Ile Ser Leu Ile Ala  
370 375 380

Ser Leu Phe Ala Gly Ile Leu Arg Gly Ser Arg Arg Asp Arg Leu Leu  
385 390 395 400

Ser Lys Phe Val Glu Asn Glu Phe Glu Lys Ile Asp Arg Leu Met Glu  
405 410 415

Leu Tyr Leu Arg Tyr Ser Asp Arg Val Arg Ser Glu Ala Glu Arg Leu  
420 425 430

Asp Gln Leu Glu Leu Asp Asp Leu Glu Leu Asp Glu Asp Glu Lys Tyr  
435 440 445

Asn Arg Lys Leu Glu Ser Gly Leu Tyr Ser Leu Gln Leu Val Ala Val  
450 455 460

Ile Leu Gly His Ile Trp Cys Ser Glu His Ser Gly Met Arg Ala Arg  
465 470 475 480

Val Glu Leu Leu Leu Lys Gln Gln Lys Leu Ser Lys Thr Asp Val Lys  
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Ser Ser Gln Ser Lys Ala Asp Phe Ser Phe Asp Leu Lys Leu Gly Arg  
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Asn Ile Gly Asn Ser Ser Ser Val Phe Gly Asp Thr Glu Gln Val Ile  
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Ser Leu Ser Lys Trp Lys Asp Ser Ala Leu Ala Lys Pro Glu Gly Ser  
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Arg Ser Ser Ser Ser Lys Arg Thr Arg Gly Asn Gly Val Gly Thr Asn  
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Gln Met Pro Ile Cys Leu Val Asp Gly Cys Asp Ser Asp Phe Ser Asn  
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Cys Arg Glu Tyr His Lys Arg His Lys Val Cys Asp Val His Ser Lys  
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Thr Pro Val Val Thr Ile Asn Gly His Lys Gln Arg Phe Cys Gln Gln  
 130 135 140

Cys Ser Arg Phe His Ala Leu Glu Glu Phe Asp Glu Gly Lys Arg Ser  
 145 150 155 160

Cys Arg Lys Arg Leu Asp Gly His Asn Arg Arg Arg Lys Pro Gln  
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Pro Glu His Ile Gly Arg Pro Ala Asn Phe Phe Thr Gly Phe Gln Gly  
 180 185 190

Ser Lys Leu Leu Glu Phe Ser Gly Gly Ser His Val Phe Pro Thr Thr  
 195 200 205

Ser Val Leu Asn Pro Ser Trp Gly Asn Ser Leu Val Ser Val Ala Val  
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Ala Ala Asn Gly Ser Ser Tyr Gly Gln Ser Gln Ser Tyr Val Val Gly  
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Ser Ser Pro Ala Lys Thr Gly Ile Met Phe Pro Ile Ser Ser Ser Pro  
245 250 255

Asn Ser Thr Arg Ser Ile Ala Lys Gln Phe Pro Phe Leu Gln Glu Glu  
260 265 270

Glu Ser Ser Arg Thr Ala Ser Leu Cys Glu Arg Met Thr Ser Cys Ile  
275 280 285

His Asp Ser Asp Cys Ala Leu Ser Leu Leu Ser Ser Ser Ser Ser  
290 295 300

Val Pro His Leu Leu Gln Pro Pro Leu Ser Leu Ser Gln Glu Ala Val  
305 310 315 320

Glu Thr Val Phe Tyr Gly Ser Gly Leu Phe Glu Asn Ala Ser Ala Val  
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gccactcctc	caagggtcca	atcccatctc	acagacataa	aactcggatt	cggcgatcta	5460
gcatctcccc	ttcgtttatt	tgaacctatc	gatcacctgg	gatttcgaag	tgagcatttt	5520
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attagctctt	cagagaacaa	gtacatctat	tggttacgga	atggttgac	tgttcttacc	5940
gtgaagtca	ctgaaccacc	cactctacct	ccaactgtgt	cagctatagc	tcaatcagtc	6000
cgcttttat	atggtaaga	ctctacaacc	attccaccgt	ttgtgatacc	agagccgcca	6060
cctctgtgct	ccagagatcc	aagacacagt	ctgcgtaaga	aaaggaaacg	taaattgcac	6120

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caagaatctg aaaatgcatt gaacaagcag tgtgagccca tagaggctga aagtcaaaac 6600
accaatgcag aagaagaagc agaggcacaa gaagaagatg aagaatccat gaagatggtg 6660
actggaattt ctcttagtga cgactga 6687

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&lt;210&gt; 1294

&lt;211&gt; 2228

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1294

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Met Lys Gln Lys Arg Arg Lys Leu Pro Ser Ile Leu Asp Ile Leu Asp
1          5          10          15

```

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Gln Lys Val Asp Ser Ser Met Ala Phe Asp Ser Pro Glu Tyr Thr Ser
          20          25          30

```

```

Ser Ser Lys Pro Ser Lys Gln Arg Leu Lys Thr Asp Ser Thr Pro Glu
          35          40          45

```

```

Arg Asn Ser Ser Lys Arg Lys Gly Asn Asp Gly Asn Tyr Phe Glu Cys
          50          55          60

```

```

Val Ile Cys Asp Leu Gly Gly Asp Leu Leu Cys Cys Asp Ser Cys Pro
65          70          75          80

```

```

Arg Thr Tyr His Thr Ala Cys Leu Asn Pro Pro Leu Lys Arg Ile Pro
          85          90          95

```

```

Asn Gly Lys Trp Ile Cys Pro Lys Cys Ser Pro Asn Ser Glu Ala Leu
          100          105          110

```

```

Lys Pro Val Asn Arg Leu Asp Ala Ile Ala Lys Arg Ala Arg Thr Lys
          115          120          125

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Thr Lys Lys Arg Asn Ser Lys Ala Gly Pro Lys Cys Glu Arg Ala Ser  
130 135 140

Gln Ile Tyr Cys Ser Ser Ile Ile Ser Gly Glu Gln Ser Ser Glu Lys  
145 150 155 160

Gly Lys Ser Ile Ser Ala Glu Glu Ser Lys Ser Thr Gly Lys Glu Val  
165 170 175

Tyr Ser Ser Pro Met Asp Gly Cys Ser Thr Ala Glu Leu Gly His Ala  
180 185 190

Ser Ala Asp Asp Arg Pro Asp Ser Ser Ser His Gly Glu Asp Asp Leu  
195 200 205

Gly Lys Pro Val Ile Pro Thr Ala Asp Leu Pro Ser Asp Ala Gly Leu  
210 215 220

Thr Leu Leu Ser Cys Glu Asp Leu Ser Glu Ser Lys Leu Ser Asp Thr  
225 230 235 240

Glu Lys Thr His Glu Ala Pro Val Glu Lys Leu Glu His Ala Ser Ser  
245 250 255

Glu Ile Val Glu Asn Lys Thr Val Ala Glu Met Glu Thr Gly Lys Gly  
260 265 270

Lys Arg Lys Lys Arg Lys Arg Glu Leu Asn Asp Gly Glu Ser Leu Glu  
275 280 285

Arg Cys Lys Thr Asp Lys Lys Arg Ala Lys Lys Ser Leu Ser Lys Val  
290 295 300

Gly Ser Ser Ser Gln Thr Thr Lys Ser Pro Glu Ser Ser Lys Lys Lys  
305 310 315 320

Lys Lys Lys Asn Arg Val Thr Leu Lys Ser Leu Ser Lys Pro Gln Ser  
325 330 335

Lys Thr Glu Thr Pro Glu Lys Val Lys Lys Leu Pro Lys Glu Glu Arg  
340 345 350

Arg Ala Val Arg Ala Thr Asn Lys Ser Ser Ser Cys Leu Glu Asp Thr  
355 360 365

Asn Ser Leu Pro Val Gly Asn Leu Gln Val His Arg Val Leu Gly Cys

370

375

Arg Ile Gln Gly Leu Thr Lys Thr Ser Leu Cys Ser Ala Leu Ser Asp  
 385 390 395 400  
 Asp Leu Cys Ser Asp Asn Leu Gln Ala Thr Asp Gln Arg Asp Ser Leu  
 405 410 415  
 Val Gln Asp Thr Asn Ala Glu Leu Val Val Ala Glu Asp Arg Ile Asp  
 420 425 430  
 Ser Ser Ser Glu Thr Gly Lys Ser Arg Asp Ser Arg Leu Arg Asp  
 435 440 445  
 Lys Asp Met Asp Asp Ser Ala Leu Gly Thr Glu Gly Met Val Glu Val  
 450 455 460  
 Lys Glu Glu Met Leu Ser Glu Asp Ile Ser Asn Ala Thr Leu Ser Arg  
 465 470 475 480  
 His Val Asp Asp Glu Asp Met Lys Val Ser Glu Thr His Val Ser Val  
 485 490 495  
 Glu Arg Glu Leu Leu Glu Glu Ala His Gln Glu Thr Gly Glu Lys Ser  
 500 505 510  
 Thr Val Ala Asp Glu Glu Ile Glu Glu Pro Val Ala Ala Lys Thr Ser  
 515 520 525  
 Asp Leu Ile Gly Glu Thr Val Ser Tyr Glu Phe Leu Val Lys Trp Val  
 530 535 540  
 Asp Lys Ser Asn Ile His Asn Thr Trp Ile Ser Glu Ala Glu Leu Lys  
 545 550 555 560  
 Gly Leu Ala Lys Arg Lys Leu Glu Asn Tyr Lys Ala Lys Tyr Gly Thr  
 565 570 575  
 Ala Val Ile Asn Ile Cys Glu Asp Lys Trp Lys Gln Pro Gln Arg Ile  
 580 585 590  
 Val Ala Leu Arg Val Ser Lys Glu Gly Asn Gln Glu Ala Tyr Val Lys  
 595 600 605  
 Trp Thr Gly Leu Ala Tyr Asp Glu Cys Thr Trp Glu Ser Leu Glu Glu  
 610 615 620

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Pro Ile Leu Lys His Ser Ser His Leu Ile Asp Leu Phe His Gln Tyr  
625 630 635 640

Glu Gln Lys Thr Leu Glu Arg Asn Ser Lys Gly Asn Pro Thr Arg Glu  
645 650 655

Arg Gly Glu Val Val Thr Leu Thr Glu Gln Pro Gln Glu Leu Arg Gly  
660 665 670

Gly Ala Leu Phe Ala His Gln Leu Glu Ala Leu Asn Trp Leu Arg Arg  
675 680 685

Cys Trp His Lys Ser Lys Asn Val Ile Leu Ala Asp Glu Met Gly Leu  
690 695 700

Gly Lys Thr Val Ser Ala Ser Ala Phe Leu Ser Ser Leu Tyr Phe Glu  
705 710 715 720

Phe Gly Val Ala Arg Pro Cys Leu Val Leu Val Pro Leu Ser Thr Met  
725 730 735

Pro Asn Trp Leu Ser Glu Phe Ser Leu Trp Ala Pro Leu Leu Asn Val  
740 745 750

Val Glu Tyr His Gly Ser Ala Lys Gly Arg Ala Ile Ile Arg Asp Tyr  
755 760 765

Glu Trp His Ala Lys Asn Ser Thr Gly Thr Thr Lys Lys Pro Thr Ser  
770 775 780

Tyr Lys Phe Asn Val Leu Leu Thr Thr Tyr Glu Met Val Leu Ala Asp  
785 790 795 800

Ser Ser His Leu Arg Gly Val Pro Trp Glu Val Leu Val Val Asp Glu  
805 810 815

Gly His Arg Leu Lys Asn Ser Glu Ser Lys Leu Phe Ser Leu Asn  
820 825 830

Thr Phe Ser Phe Gln His Arg Val Leu Leu Thr Gly Thr Pro Leu Gln  
835 840 845

Asn Asn Ile Gly Glu Met Tyr Asn Leu Leu Asn Phe Leu Gln Pro Ser  
850 855 860

Ser Phe Pro Ser Leu Ser Ser Phe Glu Glu Arg Phe His Asp Leu Thr  
865 870 875 880

047-E2F-PCT.ST25.txt

Ser Ala Glu Lys Val Glu Glu Leu Lys Lys Leu Val Ala Pro His Met  
885 890

Leu Arg Arg Leu Lys Lys Asp Ala Met Gln Asn Ile Pro Pro Lys Thr  
900 905 910

Glu Arg Met Val Pro Val Glu Leu Thr Ser Ile Gln Ala Glu Tyr Tyr  
915 920 925

Arg Ala Met Leu Thr Lys Asn Tyr Gln Ile Leu Arg Asn Ile Gly Lys  
930 935 940

Gly Val Ala Gln Gln Ser Met Leu Asn Ile Val Met Gln Leu Arg Lys  
945 950 955 960

Val Cys Asn His Pro Tyr Leu Ile Pro Gly Thr Glu Pro Glu Ser Gly  
965 970 975

Ser Leu Glu Phe Leu His Asp Met Arg Ile Lys Ala Ser Ala Lys Leu  
980 985 990

Thr Leu Leu His Ser Met Leu Lys Val Leu His Lys Glu Gly His Arg  
995 1000 1005

Val Leu Ile Phe Ser Gln Met Thr Lys Leu Leu Asp Ile Leu Glu  
1010 1015 1020

Asp Tyr Leu Asn Ile Glu Phe Gly Pro Lys Thr Phe Glu Arg Val  
1025 1030 1035

Asp Gly Ser Val Ala Val Ala Asp Arg Gln Ala Ala Ile Ala Arg  
1040 1045 1050

Phe Asn Gln Asp Lys Asn Arg Phe Val Phe Leu Leu Ser Thr Arg  
1055 1060 1065

Ala Cys Gly Leu Gly Ile Asn Leu Ala Thr Ala Asp Thr Val Ile  
1070 1075 1080

Ile Tyr Asp Ser Asp Phe Asn Pro His Ala Asp Ile Gln Ala Met  
1085 1090 1095

Asn Arg Ala His Arg Ile Gly Gln Ser Lys Arg Leu Leu Val Tyr  
1100 1105 1110

Arg Leu Val Val Arg Ala Ser Val Glu Glu Arg Ile Leu Gln Leu  
1115 1120 1125

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Ala Lys 1130	Lys Lys Leu Met 1135	Leu Asp Gln Leu Phe 1140	Val Asn Lys Ser
Gly Ser 1145	Gln Lys Glu Phe 1150	Asp Ile Leu Arg 1155	Trp Gly Thr Glu
Glu Leu 1160	Phe Asn Asp Ser 1165	Gly Glu Asn Lys 1170	Lys Asp Thr Ala
Glu Ser 1175	Asn Gly Asn Leu 1180	Val Ile Met Asp 1185	Leu Glu Ser Lys
Ser Arg 1190	Lys Lys Gly Gly 1195	Leu Gly Asp Val 1200	Tyr Gln Asp Lys
Cys Thr 1205	Glu Gly Asn Gly 1210	Lys Ile Val Trp Asp 1215	Asp Ile Ala Ile
Met Lys 1220	Leu Leu Asp Arg 1225	Ser Asn Leu Gln Ser 1230	Ala Ser Thr Asp
Ala Ala 1235	Asp Thr Glu Leu 1240	Asn Asp Met Leu 1245	Gly Ser Val Lys
Pro Val 1250	Glu Trp Asn Glu 1255	Glu Thr Ala Glu Glu 1260	Gln Val Gly Ala
Glu Ser 1265	Pro Ala Leu Val 1270	Thr Asp Asp Thr 1275	Gly Pro Ser Ser
Glu Arg 1280	Lys Asp Asp Asp 1285	Val Val Asn Phe Thr 1290	Glu Glu Asn Glu
Trp Asp 1295	Arg Leu Leu Arg 1300	Met Arg Leu Glu Phe 1305	Pro Leu Ser Leu
Ser Ser 1310	Ala Ser Trp Leu 1315	Trp Ser Trp Gln His 1320	Ile Trp Glu Lys
Tyr Gln 1325	Ser Glu Glu Glu 1330	Ala Ala Leu Gly Arg 1335	Gly Lys Arg Leu
Arg Lys 1340	Ala Val Ser Tyr 1345	Arg Glu Ala Tyr Ala 1350	Pro His Thr Ser
Gly Pro	Val Asn Glu Ser Gly	Gly Glu Asp Glu Lys	Glu Pro Glu

1355

1360

1365

Pro Glu Leu Lys Lys Glu Tyr Thr Pro Ala Gly Arg Ala Leu Lys  
 1370 1375 1380  
 Glu Lys Phe Thr Lys Leu Arg Glu Arg Gln Lys Asn Leu Ile Ala  
 1385 1390 1395  
 Arg Arg Asn Ser Val Glu Glu Ser Leu Pro Ser Gly Asn Val Asp  
 1400 1405 1410  
 Gln Val Thr Glu Val Ala Asn Gln Asp Glu Glu Ser Pro Thr Ser  
 1415 1420 1425  
 Met Asp Leu Asp Asp Ser Lys Ala Ser Gln Gln Cys Asp Ala Gln  
 1430 1435 1440  
 Lys Arg Lys Ala Ser Ser Ser Asp Pro Lys Pro Asp Leu Leu Ser  
 1445 1450 1455  
 Gln His His His Gly Ala Glu Cys Leu Pro Ser Leu Pro Pro Asn  
 1460 1465 1470  
 Asn Leu Pro Val Leu Gly Leu Cys Ala Pro Asn Phe Thr Gln Ser  
 1475 1480 1485  
 Glu Ser Ser Arg Arg Asn Tyr Ser Arg Pro Gly Ser Arg Gln Asn  
 1490 1495 1500  
 Arg Pro Ile Thr Gly Pro His Phe Pro Phe Asn Leu Pro Gln Thr  
 1505 1510 1515  
 Ser Asn Leu Val Glu Arg Glu Ala Asn Asp Gln Glu Pro Pro Met  
 1520 1525 1530  
 Gly Lys Leu Lys Pro Gln Asn Ile Lys Glu Glu Pro Phe Gln Gln  
 1535 1540 1545  
 Pro Leu Ser Asn Met Asp Gly Trp Leu Pro His Arg Gln Phe Pro  
 1550 1555 1560  
 Pro Ser Gly Asp Phe Glu Arg Pro Arg Ser Ser Gly Ala Ala Phe  
 1565 1570 1575  
 Ala Asp Phe Gln Glu Lys Phe Pro Leu Leu Asn Leu Pro Phe Asp  
 1580 1585 1590

Asp Lys Leu Leu Pro Arg Phe Pro Phe Gln Pro Arg Thr Met Gly  
 1595 1600 1605  
 Thr Ser His Gln Asp Ile Met Ala Asn Leu Ser Met Arg Lys Arg  
 1610 1615 1620  
 Phe Glu Gly Thr Gly His Ser Met Gln Asp Leu Phe Gly Gly Thr  
 1625 1630 1635  
 Pro Met Pro Phe Leu Pro Asn Met Lys Ile Pro Pro Met Asp Pro  
 1640 1645 1650  
 Pro Val Phe Asn Gln Gln Glu Lys Asp Leu Pro Pro Leu Gly Leu  
 1655 1660 1665  
 Asp Gln Phe Pro Ser Ala Leu Ser Ser Ile Pro Glu Asn His Arg  
 1670 1675 1680  
 Lys Val Leu Glu Asn Ile Met Leu Arg Thr Gly Ser Gly Ile Gly  
 1685 1690 1695  
 His Val Gln Lys Lys Lys Thr Arg Val Asp Ala Trp Ser Glu Asp  
 1700 1705 1710  
 Glu Leu Asp Ser Leu Trp Ile Gly Ile Arg Arg His Gly Tyr Gly  
 1715 1720 1725  
 Asn Trp Glu Thr Ile Leu Arg Asp Pro Arg Leu Lys Phe Ser Lys  
 1730 1735 1740  
 Phe Lys Thr Pro Glu Tyr Leu Ala Ala Arg Trp Glu Glu Glu Gln  
 1745 1750 1755  
 Arg Lys Phe Leu Asp Ser Leu Ser Ser Leu Pro Ser Lys Ser Ser  
 1760 1765 1770  
 Arg Thr Asp Lys Ser Thr Lys Ser Ser Leu Phe Pro Gly Leu Pro  
 1775 1780 1785  
 Gln Gly Ile Met Asn Arg Ala Leu His Gly Lys Tyr Ala Thr Pro  
 1790 1795 1800  
 Pro Arg Phe Gln Ser His Leu Thr Asp Ile Lys Leu Gly Phe Gly  
 1805 1810 1815  
 Asp Leu Ala Ser Pro Leu Pro Leu Phe Glu Pro Ser Asp His Leu  
 1820 1825 1830

## 047-E2F-PCT.ST25.txt

Gly Phe Arg Ser Glu His Phe Pro Pro Met Ala Asn Leu Cys Thr  
 1835 1840 1845  
 Asp Asn Leu Pro Gly Glu Pro Ser Ala Gly Pro Ser Glu Arg Ala  
 1850 1855 1860  
 Gly Thr Ser Thr Asn Ile Pro Asn Glu Lys Pro Phe Pro Leu Asn  
 1865 1870 1875  
 Ser Leu Gly Met Gly Asn Leu Gly Ser Leu Gly Leu Asp Ser Leu  
 1880 1885 1890  
 Ser Ser Leu Asn Thr Leu Arg Ala Glu Glu Lys Arg Asp Ala Ile  
 1895 1900 1905  
 Lys Arg Gly Lys Leu Pro Leu Phe Leu Asp Met Pro Leu Pro Gln  
 1910 1915 1920  
 Met Leu Asp Ser Ser Asn Asn Val Phe Leu Gly Arg Ser Ala Asn  
 1925 1930 1935  
 Pro Ser Phe Leu His Pro Asn Arg Gly Leu Asn Pro Ser Asn Pro  
 1940 1945 1950  
 Met Gly Arg Asp Ile Met Gly Ile Ser Ser Ser Glu Asn Lys Leu  
 1955 1960 1965  
 Pro His Trp Leu Arg Asn Val Val Thr Val Pro Thr Val Lys Ser  
 1970 1975 1980  
 Pro Glu Pro Pro Thr Leu Pro Pro Thr Val Ser Ala Ile Ala Gln  
 1985 1990 1995  
 Ser Val Arg Val Leu Tyr Gly Glu Asp Ser Thr Thr Ile Pro Pro  
 2000 2005 2010  
 Phe Val Ile Pro Glu Pro Pro Pro Pro Ala Pro Arg Asp Pro Arg  
 2015 2020 2025  
 His Ser Leu Arg Lys Lys Arg Lys Arg Lys Leu His Ser Ser Ser  
 2030 2035 2040  
 Gln Lys Thr Thr Asp Ile Gly Ser Ser Ser His Asn Ala Val Glu  
 2045 2050 2055  
 Ser Ser Ser Gln Gly Asn Pro Gln Thr Ser Ala Thr Pro Pro Leu  
 2060 2065 2070



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Pro Pro Pro Ser Leu Ala Gly Glu Thr Ser Gly Ser Ser Gln Pro  
 2075 2080 2085  
 Lys Leu Pro Pro His Asn Leu Asn Ser Thr Glu Pro Leu Ser Ser  
 2090 2095 2100  
 Glu Ala Ile Ile Ile Pro Pro Glu Glu Asp Ser Val Ile Ala  
 2105 2110 2115  
 Ala Ala Pro Ser Glu Ala Pro Gly Pro Ser Leu Glu Gly Ile Thr  
 2120 2125 2130  
 Gly Thr Thr Lys Ser Ile Ser Leu Glu Ser Gln Ser Ser Glu Pro  
 2135 2140 2145  
 Glu Thr Ile Asn Gln Asp Gly Asp Leu Asp Pro Glu Thr Asp Glu  
 2150 2155 2160  
 Lys Val Glu Ser Glu Arg Thr Pro Leu His Ser Asp Glu Lys Gln  
 2165 2170 2175  
 Glu Glu Gln Glu Ser Glu Asn Ala Leu Asn Lys Gln Cys Glu Pro  
 2180 2185 2190  
 Ile Glu Ala Glu Ser Gln Asn Thr Asn Ala Glu Glu Glu Ala Glu  
 2195 2200 2205  
 Ala Gln Glu Glu Asp Glu Glu Ser Met Lys Met Val Thr Gly Asn  
 2210 2215 2220  
 Ser Leu Ser Asp Asp  
 2225

<210> 1295

<211> 1875

<212> DNA

<213> Arabidopsis thaliana

<400> 1295  
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 ccaaccgtcg ccgtcgtcgg tggtcagagt tctgggaaat cttcgggttct tgagagtata 180

gttgggagag	attttcttcc	tagaggatct	ggtatcggtta	cgagacggcc	tttagtggtg	240
cagcttcata	agactgatga	tggaacagag	gagtatgcag	agttccttca	tcttcccaag	300
aagcaattca	cagattttgc	tttggttcgc	aggagagattc	aggatgagac	tgatagaatc	360
acagggaaaa	acaacagat	atctccagtt	cctattcacc	tcagtatcta	ctctccaaat	420
gttgtgaatt	tgacactcat	tgatttgccc	ggtttaacta	aagtggctgt	tgagggacag	480
ccggaacca	ttgctgagga	tatcgaatcc	atggttcgca	catatgttga	taagcccaat	540
tgatcatat	tggtctatct	tcttccaac	caagacattg	ccacatcaga	tgcaattaag	600
ctcgcaaaag	atgtcgatcc	aacaggtgag	aggacatttg	gtgttcttac	caagttagac	660
ttgatggaca	aaggaactaa	tgctgttagaa	gttcttgaag	gaagatctta	caggctgcaa	720
catccttggtg	ttgggatagt	gaaccgttca	caagcagata	ttaataagaa	tgctgatatg	780
atgcttgcaa	gacgcaagga	acgagaatat	tttgatacca	gtcctgacta	tggtcactta	840
gccagcaaaa	tgggttcaga	atatctggca	aagctgtctt	ctaagcactt	ggagtctggt	900
atcaggaccc	gtattccaag	tatactatcc	ttaataaaca	aaagcattga	agaacttgaa	960
agagagttag	accgaatggg	tcggcctgtc	gcagttgatg	ctggggctca	actatacact	1020
atattggaga	tgtgccgtgc	attcgataag	atattcaagg	aacatcttga	tggcgggcgt	1080
cctggaggty	accgtatcta	tggagtcttt	gacaaccaac	ttccagctgc	acttaaaaag	1140
cttccttttg	atcgccatct	ttcttctaca	agcgtgaaga	aaatcgtgtc	cgaggcagat	1200
ggttatcaac	ctcacttgat	tgaccagaa	cagggttatc	gccgtctaata	cgaaggggca	1260
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gagcttgtga	ggaatcaat	atcagaaact	gaggagctaa	agcgtttccc	ttcactgcaa	1380
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tgtcagggtta	gacaagccaa	gtcgcgattg	ctcaattact	tctactctca	gatcagcaag	1740
agagagggga	aacagttggg	acagttacta	gatgaagatc	cggcattgat	ggaccggaga	1800
ctagagtgcg	cgaagaggct	agagttatcc	aagaaagcaa	gagatgagat	tgatgctggt	1860
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&lt;210&gt; 1296

&lt;211&gt; 624

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1296

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Met Thr Thr Met Glu Ser Leu Ile Gly Leu Val Asn Arg Ile Gln Arg
 1      5      10      15

Ala Cys Thr Val Leu Gly Asp Tyr Gly Gly Gly Thr Gly Ser Asn Ala
 20      25      30

Phe Asn Ser Leu Trp Glu Ala Leu Pro Thr Val Ala Val Val Gly Gly
 35      40      45

Gln Ser Ser Gly Lys Ser Ser Val Leu Glu Ser Ile Val Gly Arg Asp
 50      55

Phe Leu Pro Arg Gly Ser Gly Ile Val Thr Arg Arg Pro Leu Val Leu
 65      70      75      80

Gln Leu His Lys Thr Asp Asp Gly Thr Glu Glu Tyr Ala Glu Phe Leu
 85      90      95

His Leu Pro Lys Lys Gln Phe Thr Asp Phe Ala Leu Val Arg Arg Glu
100      105      110

Ile Gln Asp Glu Thr Asp Arg Ile Thr Gly Lys Asn Lys Gln Ile Ser
115      120      125

Pro Val Pro Ile His Leu Ser Ile Tyr Ser Pro Asn Val Val Asn Leu
130      135      140

Thr Leu Ile Asp Leu Pro Gly Leu Thr Lys Val Ala Val Glu Gly Gln
145      150      155      160

Pro Glu Thr Ile Ala Glu Asp Ile Glu Ser Met Val Arg Thr Tyr Val
165      170      175

Asp Lys Pro Asn Cys Ile Ile Leu Ala Ile Ser Pro Ala Asn Gln Asp
180      185      190

Ile Ala Thr Ser Asp Ala Ile Lys Leu Ala Lys Asp Val Asp Pro Thr
195      200      205

Gly Glu Arg Thr Phe Gly Val Leu Thr Lys Leu Asp Leu Met Asp Lys
210      215      220

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Gly Thr Asn Ala Leu Glu Val Leu Glu Gly Arg Ser Tyr Arg Leu Gln  
 225 230 235  
 His Pro Trp Val Gly Ile Val Asn Arg Ser Gln Ala Asp Ile Asn Lys  
 245 250 255  
 Asn Val Asp Met Met Leu Ala Arg Arg Lys Glu Arg Glu Tyr Phe Asp  
 260 265 270  
 Thr Ser Pro Asp Tyr Gly His Leu Ala Ser Lys Met Gly Ser Glu Tyr  
 275 280 285  
 Leu Ala Lys Leu Leu Ser Lys His Leu Glu Ser Val Ile Arg Thr Arg  
 290 295 300  
 Ile Pro Ser Ile Leu Ser Leu Ile Asn Lys Ser Ile Glu Glu Leu Glu  
 305 310 315 320  
 Arg Glu Leu Asp Arg Met Gly Arg Pro Val Ala Val Asp Ala Gly Ala  
 325 330 335  
 Gln Leu Tyr Thr Ile Leu Glu Met Cys Arg Ala Phe Asp Lys Ile Phe  
 340 345 350  
 Lys Glu His Leu Asp Gly Gly Arg Pro Gly Gly Asp Arg Ile Tyr Gly  
 355 360 365  
 Val Phe Asp Asn Gln Leu Pro Ala Ala Leu Lys Lys Leu Pro Phe Asp  
 370 375 380  
 Arg His Leu Ser Leu Gln Ser Val Lys Lys Ile Val Ser Glu Ala Asp  
 385 390 395 400  
 Gly Tyr Gln Pro His Leu Ile Ala Pro Glu Gln Gly Tyr Arg Arg Leu  
 405 410 415  
 Ile Glu Gly Ala Leu Gly Tyr Phe Arg Gly Pro Ala Glu Ala Ser Val  
 420 425 430  
 Asp Ala Val His Tyr Val Leu Lys Glu Leu Val Arg Lys Ser Ile Ser  
 435 440 445  
 Glu Thr Glu Glu Leu Lys Arg Phe Pro Ser Leu Gln Val Glu Leu Ala  
 450 455 460  
 Ala Ala Ala Asn Ser Ser Leu Glu Lys Phe Arg Glu Glu Ser Lys Lys  
 465 470 475 480

047-E2F-PCT.ST25.txt

Ser Val Ile Arg Leu Val Asp Met Glu Ser Ala Tyr Leu Thr Ala Glu  
485 490 495

Phe Phe Arg Lys Leu Pro Gln Glu Ile Glu Arg Pro Val Thr Asn Ser  
500 505 510

Lys Asn Gln Thr Ala Ser Pro Ser Ser Ala Thr Leu Asp Gln Tyr Gly  
515 520 525

Asp Gly His Phe Arg Arg Ile Ala Ser Asn Val Ser Ala Tyr Val Asn  
530 535 540

Met Val Ser Asp Thr Leu Arg Asn Thr Ile Pro Lys Ala Cys Val Tyr  
545 550 555 560

Cys Gln Val Arg Gln Ala Lys Leu Ala Leu Leu Asn Tyr Phe Tyr Ser  
565 570 575

Gln Ile Ser Lys Arg Glu Gly Lys Gln Leu Gly Gln Leu Leu Asp Glu  
580 585 590

Asp Pro Ala Leu Met Asp Arg Arg Leu Glu Cys Ala Lys Arg Leu Glu  
595 600 605

Leu Tyr Lys Lys Ala Arg Asp Glu Ile Asp Ala Val Ala Trp Val Arg  
610 615 620

<210> 1297

<211> 519

<212> DNA

<213> Arabidopsis thaliana

<400> 1297

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cctggaatga gtaaaactgt acctgaggag attgaaaaca aaaccagaga gtacatgcct	300
ctttataaag ttggagagaa gtgggatatc gctatggctg cactctacct cagctgtgat	360
tctgggaaat atgtgagcgg actaacaatg gtggtagatg gaggactgtg gcttagcaaa	420

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<210> 1298

<211> 172

<212> PRT

<213> Arabidopsis thaliana

<400> 1298

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Asp Ser Ser Ser Gly Gly Gly Ser Ile Ile Asn Ile Ser Ala Thr Leu  
 20 25 30

His Tyr Thr Ala Ser Trp Tyr Gln Ile His Val Ser Ala Ala Lys Ala  
 35 40 45

Ala Val Asp Ala Thr Thr Arg Asn Leu Ala Leu Glu Trp Gly Thr Asp  
 50 55 60

Tyr Asp Ile Arg Val Asn Gly Ile Ala Pro Gly Pro Ile Gly Gly Thr  
 65 70 75 80

Pro Gly Met Ser Lys Leu Val Pro Glu Glu Ile Glu Asn Lys Thr Arg  
 85 90 95

Glu Tyr Met Pro Leu Tyr Lys Val Gly Glu Lys Trp Asp Ile Ala Met  
 100 105 110

Ala Ala Leu Tyr Leu Ser Cys Asp Ser Gly Lys Tyr Val Ser Gly Leu  
 115 120 125

Thr Met Val Val Asp Gly Gly Leu Trp Leu Ser Lys Pro Arg His Leu  
 130 135 140

Pro Lys Glu Ala Val Lys Gln Leu Ser Arg Ala Val Glu Lys Arg Ser  
 145 150 155 160

Arg Ala Lys Pro Val Gly Leu Pro Thr Ser Lys Leu  
 165 170

<210> 1299

&lt;211&gt; 1221

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1299

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tctgttcctg ttgatgcttt caagcagagc tgctgggcta gtatgcctcc ggagctcctg      180
agagatgttc ttatgaggat tgagcaatcc gaagacactt ggccgtctag gaaaaatgtt      240
gtttcttgcg ctgggtgtctg caggaaactg cgagaaatcg tcaaagagat cgtcagagtt      300
cctgagcttt ctagcaaaat cacttttctt atctccctca aacagccggg tcctagagga      360
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accaagatag catgtgaatg a                                     1221

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&lt;210&gt; 1300

&lt;211&gt; 406

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1300

047-E2F-PCT.ST25.txt

Met Ser Phe Lys Ser Leu Ile Gln Asp Met Arg Gly Glu Leu Gly  
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Ile Ser Arg Lys Gly Phe Asp Val Arg Phe Gly Tyr Gly Arg Ser Arg  
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Ser Gln Arg Val Val Gln Asp Thr Ser Val Pro Val Asp Ala Phe Lys  
35 40 45  
Gln Ser Cys Trp Ala Ser Met Pro Pro Glu Leu Leu Arg Asp Val Leu  
50 55 60  
Met Arg Ile Glu Gln Ser Glu Asp Thr Trp Pro Ser Arg Lys Asn Val  
65 70 75 80  
Val Ser Cys Ala Gly Val Cys Arg Asn Trp Arg Glu Ile Val Lys Glu  
85 90 95  
Ile Val Arg Val Pro Glu Leu Ser Ser Lys Leu Thr Phe Pro Ile Ser  
100 105 110  
Leu Lys Gln Pro Gly Pro Arg Gly Ser Leu Val Gln Cys Tyr Ile Met  
115 120 125  
Arg Asn Arg Ser Asn Gln Thr Tyr Tyr Leu Tyr Leu Gly Leu Asn Gln  
130 135 140  
Ala Ala Ser Asn Asp Asp Gly Lys Phe Leu Leu Ala Ala Lys Arg Phe  
145 150 155 160  
Arg Arg Pro Thr Cys Thr Asp Tyr Ile Ile Ser Leu Asn Cys Asp Asp  
165 170 175  
Val Ser Arg Gly Ser Asn Thr Tyr Ile Gly Lys Leu Arg Ser Asn Phe  
180 185 190  
Leu Gly Thr Lys Phe Thr Val Tyr Asp Ala Gln Pro Thr Asn Pro Gly  
195 200 205  
Thr Gln Val Thr Arg Thr Arg Ser Ser Arg Leu Leu Ser Leu Lys Gln  
210 215 220  
Val Ser Pro Arg Ile Pro Ser Gly Asn Tyr Pro Val Ala His Ile Ser  
225 230 235 240  
Tyr Glu Leu Asn Val Leu Gly Ser Arg Gly Pro Arg Arg Met Gln Cys  
245 250 255



Val Met Asp Ala Ile Pro Ala Ser Ala Val Glu Pro Gly Gly Thr Ala  
260 265 270

Pro Thr Gln Thr Glu Leu Val His Ser Asn Leu Asp Ser Phe Pro Ser  
275 280 285

Phe Ser Phe Phe Arg Ser Lys Ser Ile Arg Ala Glu Ser Leu Pro Ser  
290 295 300

Gly Pro Ser Ser Ala Ala Gln Lys Glu Gly Leu Leu Val Leu Lys Asn  
305 310 315 320

Lys Ala Pro Arg Trp His Glu Gln Leu Gln Cys Trp Cys Leu Asn Phe  
325 330 335

Asn Gly Arg Val Thr Val Ala Ser Val Lys Asn Phe Gln Leu Val Ala  
340 345 350

Ala Pro Glu Asn Gly Pro Ala Gly Pro Glu His Glu Asn Val Ile Leu  
355 360 365

Gln Phe Gly Lys Val Gly Lys Asp Val Phe Thr Met Asp Tyr Gln Tyr  
370 375 380

Pro Ile Ser Ala Phe Gln Ala Phe Thr Ile Cys Leu Ser Ser Phe Asp  
385 390 395 400

Thr Lys Ile Ala Cys Glu  
405

<210> 1301

<211> 1194

<212> DNA

<213> Arabidopsis thaliana

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gtcctttat cacgggtgca caatgaaatg gaaactcaa ttcattctat tgagcaagaa 180  
gcttatagct cgatactccg cgcatttaaa gccagtcg atgctattac ctgggagaaa 240  
gaaagtgtga tcactgaact cagaaaagaa cttcgagtgt ctgatgagga acacagagag 300

ctgttatcaa ggggtaacgc tgatgaaatg atcaggcgaa taaggggaatg gagaaaggca 360  
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 ggatcacgta agaagcaaaa gacatcacia tcaatcgctt cattagcgat gggcccacca 480  
 tctccttctt tgcacccttc aatgcaacca tcgtcatctg cactaagaag gggagggtcct 540  
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 ccgttggttg gaaggaaggt atggacgaag tggcctgatg acaaccaata ctacgaagct 720  
 gttataactg actacaaccc tgttgagggg cgtcatgctt tagtgtatga tattaactct 780  
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 aaccagcag aggtagagaa ggcaagaga gtgctgagag atcatgaact agctcttatg 1140  
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<210> 1302

<211> 397

<212> PRT

<213> *Arabidopsis thaliana*

<400> 1302

Met Asp Tyr Arg Pro Ser Asp Ser Ser Gly Thr Asp Asp Asp Leu Pro  
 1 5 10 15

Pro Ser His Gln Gly Arg Tyr Gln Arg Asn Ala Arg Pro Thr Gly Asn  
 20 25 30

Gly Arg Pro Ser Val Leu Asn Ser Ala Pro Leu Ser Arg Val His Asn  
 35 40 45

Glu Met Glu Thr Gln Ile His Leu Ile Glu Gln Glu Ala Tyr Ser Ser  
 50 55 60

Ile Leu Arg Ala Phe Lys Ala Gln Ser Asp Ala Ile Thr Trp Glu Lys  
 65 70 75 80

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Glu Ser Leu Ile Thr Glu Leu Arg Lys Glu Leu Arg Val Ser Asp Glu  
85 90 95

Glu His Arg Glu Leu Leu Ser Arg Val Asn Ala Asp Glu Met Ile Arg  
100 105 110

Arg Ile Arg Glu Trp Arg Lys Ala Asn Ser Leu Gln Ser Ser Val Pro  
115 120 125

Gln Leu Val His Asp Ala Pro Ser Pro Ala Val Ser Gly Ser Arg Lys  
130 135 140

Lys Gln Lys Thr Ser Gln Ser Ile Ala Ser Leu Ala Met Gly Pro Pro  
145 150 155 160

Ser Pro Ser Leu His Pro Ser Met Gln Pro Ser Ser Ser Ala Leu Arg  
165 170 175

Arg Gly Gly Pro Pro Pro Gly Pro Lys Thr Lys Lys Pro Lys Thr Ser  
180 185 190

Met Gln Tyr Pro Ser Thr Gly Ile Ala Gly Arg Pro Gln Ala Gly Ala  
195 200 205

Leu Thr Asn Glu Pro Gly Glu Ser Gly Ser Tyr Asp Pro Leu Val Gly  
210 215 220

Arg Lys Val Trp Thr Lys Trp Pro Asp Asp Asn Gln Tyr Tyr Glu Ala  
225 230 235 240

Val Ile Thr Asp Tyr Asn Pro Val Glu Gly Arg His Ala Leu Val Tyr  
245 250 255

Asp Ile Asn Ser Ala Asn Glu Thr Trp Glu Trp Val Asn Leu Lys Glu  
260 265 270

Ile Ser Pro Gly Asp Ile Arg Trp Glu Gly Glu Asp Pro Gly Ile Ser  
275 280 285

Arg Lys Gly Gly His Pro Gly Gln Gly Arg Gly Thr Lys Thr Met Ala  
290 295 300

Arg Gly Gly Pro Ala Ser Asn Ala Gly Gly Arg Gly Arg Gly Ser Met  
305 310 315 320

Arg Met Gln Gln Pro Lys Thr Gln Asn Gly Ile Gly Lys Lys Ala Leu  
325 330 335

047-E2F-PCT.ST25.txt

Gly Glu Ile Glu Ile Leu His Thr Glu Thr Leu Leu Lys Glu Val Glu  
340 345 350

Lys Val Phe Gly Ser Val Asn Pro Asn Pro Ala Glu Val Glu Lys Ala  
355 360 365

Lys Arg Val Leu Arg Asp His Glu Leu Ala Leu Met Asp Ala Ile Ala  
370 375 380

Lys Leu Glu Glu Ile Ser Asp Gly Glu Ser Gly Asn Ile  
385 390 395

<210> 1303

<211> 1020

<212> DNA

<213> Arabidopsis thaliana

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cacggtggaa ctttggttcc atactacctt gatgaagcat caggatgggg tcttgaaata 180  
tctgagctga agaacaact tgaagatgct aggtcaaagg gcatcactgt gagagctttg 240  
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aaggatggaa ttctctcatc ttgggcaaga cgtgcaaaga ctcttgaaga ggctctgaac 720  
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caggtagctg gaacatggca ttacaggtgc actatacttc cccaagagga taagattcca 960  
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&lt;210&gt; 1304

&lt;211&gt; 339

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1304

Met Thr Asp Gly Ala Ser Pro Gly Val His Met Met Met Gln Leu Leu  
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Ile Thr Ser Glu Lys Asp Gly Ile Leu Cys Pro Ile Pro Gln Tyr Pro  
 20 25 30

Leu Tyr Ser Ala Ser Ile Ala Leu His Gly Gly Thr Leu Val Pro Tyr  
 35 40 45

Tyr Leu Asp Glu Ala Ser Gly Trp Gly Leu Glu Ile Ser Glu Leu Lys  
 50 55 60

Lys Gln Leu Glu Asp Ala Arg Ser Lys Gly Ile Thr Val Arg Ala Leu  
 65 70 75 80

Ala Val Ile Asn Pro Gly Asn Pro Thr Gly Gln Val Leu Ser Glu Glu  
 85 90 95

Asn Gln Arg Asp Val Val Lys Phe Cys Lys Gln Glu Gly Leu Val Leu  
 100 105 110

Leu Ala Asp Glu Val Tyr Gln Glu Asn Val Tyr Val Pro Asp Lys Lys  
 115 120 125

Phe His Ser Phe Lys Lys Val Ala Arg Ser Met Gly Tyr Gly Glu Lys  
 130 135 140

Asp Leu Ala Leu Val Ser Phe Gln Ser Val Ser Lys Gly Tyr Tyr Gly  
 145 150 155 160

Glu Cys Gly Lys Arg Gly Gly Tyr Met Glu Val Thr Gly Phe Thr Ser  
 165 170 175

Asp Val Arg Glu Gln Ile Tyr Lys Met Ala Ser Val Asn Leu Cys Ser  
 180 185 190

Asn Ile Ser Gly Gln Ile Leu Ala Ser Leu Ile Met Ser Pro Pro Lys  
 195 200 205

047-E2F-PCT.ST25.txt

Pro Gly Asp Asp Ser Tyr Glu Ser Tyr Ile Ala Glu Lys Asp Gly Ile  
210 215 220

Leu Ser Ser Leu Ala Arg Arg Ala Lys Thr Leu Glu Glu Ala Leu Asn  
225 230 235 240

Lys Leu Glu Gly Val Thr Cys Asn Arg Ala Glu Gly Ala Met Tyr Leu  
245 250 255

Phe Pro Cys Leu His Leu Pro Gln Lys Ala Ile Ala Ala Glu Ala  
260 265 270

Glu Lys Thr Ala Pro Asp Asn Phe Tyr Cys Lys Arg Leu Leu Lys Ala  
275 280 285

Thr Gly Ile Val Val Val Pro Gly Ser Gly Phe Arg Gln Val Pro Gly  
290 295 300

Thr Trp His Phe Arg Cys Thr Ile Leu Pro Gln Glu Asp Lys Ile Pro  
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Ala Ile Val Asp Arg Leu Thr Ala Phe His Gln Ser Phe Met Asp Glu  
325 330 335

Phe Arg Asp

<210> 1305

<211> 1461

<212> DNA

<213> Arabidopsis thaliana

<400> 1305

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atcatgaaag aattggagct tgatgacgat tctgctccta actcacttaa aaccgggttc 180

accacaacca caacagattc tactatcttg cctctttacg ccgtcgattc aaatctccct 240

ggctttcccg atcagattca accgtcggat ttcgaaatcgt cttccgatgt ttatcctggg 300

cagaacaaaa caactgggta cggttttaat tctcttgata gtgtcgacaa tggaggattt 360

gatttcattg aagatctcat ccgagtcgtg gatttgtgtg aatcggacga gttacaactc 420

gctcaggtgg ttttatcacg gcttaatcaa cgcttgagat ctccggcggg tagaccgta 480

047-E2F-PCT.ST25.txt

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tattccggga tttctccgat ccctctcttc tctcatttca cggcgaatca agcgatactc 660
gattcgttga gctcgcagtc gtcttctccg tttgttcacg tgggtggattt tgagattgga 720
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cacgtggcga aacgacaagg agaattggtg ctgtgctggc atggaagagc acttgttgcc 1440
acatcagctt ggcggtttta g 1461

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<210> 1306

<211> 486

<212> PRT

<213> Arabidopsis thaliana

<400> 1306

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Met Lys Ile Pro Ala Ser Ser Pro Gln Asp Thr Thr Asn Asn Asn Asn
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Asn Thr Asn Ser Thr Asp Ser Asn His Leu Ser Met Asp Glu His Val
20           25           30

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Met Arg Ser Met Asp Trp Asp Ser Ile Met Lys Glu Leu Glu Leu Asp
35           40           45

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Asp Asp Ser Ala Pro Asn Ser Leu Lys Thr Gly Phe Thr Thr Thr Thr
50           55           60

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047-E2F-PCT.ST25.txt

Thr Asp Ser Thr Ile Leu Pro Leu Tyr Ala Val Asp Ser Asn Leu Pro  
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 Gly Phe Pro Asp Gln Ile Gln Pro Ser Asp Phe Glu Ser Ser Ser Asp  
 85 90 95  
 Val Tyr Pro Gly Gln Asn Gln Thr Thr Gly Tyr Gly Phe Asn Ser Leu  
 100 105 110  
 Asp Ser Val Asp Asn Gly Gly Phe Asp Phe Ile Glu Asp Leu Ile Arg  
 115 120 125  
 Val Val Asp Cys Val Glu Ser Asp Glu Leu Gln Leu Ala Gln Val Val  
 130 135 140  
 Leu Ser Arg Leu Asn Gln Arg Leu Arg Ser Pro Ala Gly Arg Pro Leu  
 145 150 155 160  
 Gln Arg Ala Ala Phe Tyr Phe Lys Glu Ala Leu Gly Ser Phe Leu Thr  
 165 170 175  
 Gly Ser Asn Arg Asn Pro Ile Arg Leu Ser Ser Trp Ser Glu Ile Val  
 180 185 190  
 Gln Arg Ile Arg Ala Ile Lys Glu Tyr Ser Gly Ile Ser Pro Ile Pro  
 195 200 205  
 Leu Phe Ser His Phe Thr Ala Asn Gln Ala Ile Leu Asp Ser Leu Ser  
 210 215 220  
 Ser Gln Ser Ser Ser Pro Phe Val His Val Val Asp Phe Glu Ile Gly  
 225 230 235 240  
 Phe Gly Gly Gln Tyr Ala Ser Leu Met Arg Glu Ile Thr Glu Lys Ser  
 245 250 255  
 Val Ser Gly Gly Phe Leu Arg Val Thr Ala Val Val Ala Glu Glu Cys  
 260 265 270  
 Ala Val Glu Thr Arg Leu Val Lys Glu Asn Leu Thr Gln Phe Ala Ala  
 275 280 285  
 Glu Met Lys Ile Arg Phe Gln Ile Glu Phe Val Leu Met Lys Thr Phe  
 290 295 300  
 Glu Met Leu Ser Phe Lys Ala Ile Arg Phe Val Glu Gly Glu Arg Thr  
 305 310 315 320



047-E2F-PCT.ST25.txt

Val Val Leu Ile Ser Pro Ala Ile Phe Arg Arg Leu Ser Gly Ile Thr  
325 330 335

Asp Phe Val Asn Asn Leu Arg Arg Val Ser Pro Lys Val Val Val Phe  
340 345 350

Val Asp Ser Glu Gly Trp Thr Glu Ile Ala Gly Ser Gly Ser Phe Arg  
355 360 365

Arg Glu Phe Val Ser Ala Leu Glu Phe Tyr Thr Met Val Leu Glu Ser  
370 375 380

Leu Asp Ala Ala Ala Pro Pro Gly Asp Leu Val Lys Lys Ile Val Glu  
385 390 395 400

Ala Phe Val Leu Arg Pro Lys Ile Ser Ala Ala Val Glu Thr Ala Ala  
405 410 415

Asp Arg Arg His Thr Gly Glu Met Thr Trp Arg Glu Ala Phe Cys Ala  
420 425 430

Ala Gly Met Arg Pro Ile Gln Gln Ser Gln Phe Ala Asp Phe Gln Ala  
435 440 445

Glu Cys Leu Leu Glu Lys Ala Gln Val Arg Gly Phe His Val Ala Lys  
450 455 460

Arg Gln Gly Glu Leu Val Leu Cys Trp His Gly Arg Ala Leu Val Ala  
465 470 475 480

Thr Ser Ala Trp Arg Phe  
485

<210> 1307

<211> 1383

<212> DNA

<213> Arabidopsis thaliana

<400> 1307	
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gccggttaagt ttggtacgcc ggagaagat atcgaggaga tccgtgagca tttcttctac	180

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cagaagaatt ggattggtct caacacggga agtttcttgc tcaggaactc acagtggtcg      840
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ggtaaagtct tgaccggga acttaaagac cgaccgctt tcgaagctga cgatcaatcg      960
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agtggttatt acttgacgag ttattggggg atttggttag accggtacga ggagatgatt      1080
gagaatcata aaccgggttt tggagaccat cgggtggcat tggttacgca ttctgtcggg      1140
tgtaaaccgt gcgggaaatt tggagattat ccggtggaac ggtgtctacg gcagatggat      1200
agagcgttta atttcggaga caatcagatc cttcaaatgt atggtttcac gcataaatcg      1260
cttggggagcc ggcgcgtgaa acccacgcgc aatcagacgg ataggccgct cgatgccaag      1320
gacgagtttg ggctgtctta tccgccgttc aaagcgcca agcttagtac gacgacgacg      1380
tga

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&lt;210&gt; 1308

&lt;211&gt; 460

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1308

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 1 5 10 15

Phe Met Arg Gln Gly Lys Val Thr Ile Leu Cys Leu Val Leu Thr Val  
 20 25 30

Ile Val Leu Arg Gly Thr Ile Gly Ala Gly Lys Phe Gly Thr Pro Glu  
 35 40 45  
 Lys Asp Ile Glu Glu Ile Arg Glu His Phe Phe Tyr Thr Arg Lys Arg  
 50 55 60  
 Gly Glu Pro His Arg Val Leu Val Glu Val Ser Ser Lys Thr Thr Ser  
 65 70 75 80  
 Ser Glu Asp Gly Gly Asn Gly Gly Asn Ser Tyr Glu Thr Phe Asp Ile  
 85 90 95  
 Asn Lys Leu Phe Val Asp Glu Gly Asp Glu Glu Lys Ser Arg Asp Arg  
 100 105 110  
 Thr Asn Lys Pro Tyr Ser Leu Gly Pro Lys Ile Ser Asp Trp Asp Glu  
 115 120 125  
 Gln Arg Arg Asp Trp Leu Lys Gln Asn Pro Ser Phe Pro Asn Phe Val  
 130 135 140  
 Ala Pro Asn Lys Pro Arg Val Leu Leu Val Thr Gly Ser Ala Pro Lys  
 145 150 155 160  
 Pro Cys Glu Asn Pro Val Gly Asp His Tyr Leu Leu Lys Ser Ile Lys  
 165 170 175  
 Asn Lys Ile Asp Tyr Cys Arg Ile His Gly Ile Glu Ile Phe Tyr Asn  
 180 185 190  
 Met Ala Leu Leu Asp Ala Glu Met Ala Gly Phe Trp Ala Lys Leu Pro  
 195 200 205  
 Leu Ile Arg Lys Leu Leu Leu Ser His Pro Glu Ile Glu Phe Leu Trp  
 210 215 220  
 Trp Met Asp Ser Asp Ala Met Phe Thr Asp Met Val Phe Glu Leu Pro  
 225 230 235 240  
 Trp Glu Arg Tyr Lys Asp Tyr Asn Leu Val Met His Gly Trp Asn Glu  
 245 250 255  
 Met Val Tyr Asp Gln Lys Asn Trp Ile Gly Leu Asn Thr Gly Ser Phe  
 260 265 270  
 Leu Leu Arg Asn Ser Gln Trp Ser Leu Asp Leu Leu Asp Ala Trp Ala  
 275 280 285

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Pro Met Gly Pro Lys Gly Lys Ile Arg Glu Glu Ala Gly Lys Val Leu  
290 295 300

Thr Arg Glu Leu Lys Asp Arg Pro Ala Phe Glu Ala Asp Asp Gln Ser  
305 310 315 320

Ala Met Val Tyr Leu Leu Ala Thr Glu Arg Glu Lys Trp Gly Gly Lys  
325 330 335

Val Tyr Leu Glu Ser Gly Tyr Tyr Leu His Gly Tyr Trp Gly Ile Leu  
340 345 350

Val Asp Arg Tyr Glu Glu Met Ile Glu Asn His Lys Pro Gly Phe Gly  
355 360 365

Asp His Arg Trp Pro Leu Val Thr His Phe Val Gly Cys Lys Pro Cys  
370 375 380

Gly Lys Phe Gly Asp Tyr Pro Val Glu Arg Cys Leu Arg Gln Met Asp  
385 390 395 400

Arg Ala Phe Asn Phe Gly Asp Asn Gln Ile Leu Gln Met Tyr Gly Phe  
405 410 415

Thr His Lys Ser Leu Gly Ser Arg Arg Val Lys Pro Thr Arg Asn Gln  
420 425 430

Thr Asp Arg Pro Leu Asp Ala Lys Asp Glu Phe Gly Leu Leu His Pro  
435 440 445

Pro Phe Lys Ala Ala Lys Leu Ser Thr Thr Thr Thr  
450 455 460

<210> 1309

<211> 2043

<212> DNA

<213> Arabidopsis thaliana

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tatcactctg gtctcgaagt tcatgggggtt gatatggat acggggcaca cgagaaatcg 180  
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aacctgttt	ctttgaaact	tactcacaaa	tcaatcccta	gttgggtcaa	ccgtcttgct	420
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aaagtgga	atgcacctga	agcaacagag	cttcacactg	ctggtgttag	gttcaagcca	1560
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tgctgttgct	caaataaaaa	cttcctcgac	tacatcatgc	tgctcggttg	cttcattaaa	1740
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tcagtagatg	tttcaaaact	gttcaatagc	atcagcaag	aggttatcta	tgacagaaga	1860
ttctactttt	cgatgctctc	tgagaacctt	caagcttact	gcaacacacc	atggaacagg	1920
tggaggcgga	tcttgagacg	tgactacttc	cacaatcctt	gggcagttgc	tctgtttttt	1980
gcagctttac	tcttctctct	tctcactttc	atacagtcgg	tatgctctat	cttggctctg	2040
taa						2043

&lt;210&gt; 1310

&lt;211&gt; 680

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1310

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20 25 30Gly Tyr Trp Leu Gly Ile Gly Ile Tyr His Ser Gly Leu Glu Val His  
35 40 45Gly Val Glu Tyr Gly Tyr Gly Ala His Glu Lys Ser Ser Ser Gly Ile  
50 55 60Phe Glu Val Glu Pro Lys Lys Cys Pro Gly Phe Thr Phe Arg Lys Ser  
65 70 75 80Ile Leu Val Gly Glu Thr Glu Met Lys Ala Lys Glu Val Arg Ser Phe  
85 90 95Met Glu Lys Leu Ser Glu Glu Tyr Glu Gly Asn Lys Tyr His Leu Ile  
100 105 110Thr Arg Asn Cys Asn His Phe Cys Asn His Val Ser Leu Lys Leu Thr  
115 120 125His Lys Ser Ile Pro Ser Trp Val Asn Arg Leu Ala Arg Leu Gly Phe  
130 135 140Leu Cys Asn Cys Val Leu Pro Ala Cys Leu Asn Glu Thr Lys Val Lys  
145 150 155 160Arg Val Gly Lys Asp Gly Lys Leu Leu Leu Glu Gly Glu Asn Thr Lys  
165 170 175Lys Lys Lys Arg Lys Lys Lys Ile Arg Arg Ser Arg Ser Gly Pro Leu  
180 185 190Ser Ser Ser Ser Ser Asn Ala Arg Leu Asp Asn Thr Pro Thr His Asn  
195 200 205

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Arg Ser Ile Ser Thr Gly Asn Pro Pro Leu Ser Ala Ser Pro Ser Cys  
 210 215 220

Pro Leu Arg Pro Arg Leu Pro Ser Val Ala Ser Gly Ala Glu Asp Gln  
 225 230 235 240

Asn Pro Pro Ser Arg Tyr Leu Asn Ala Ser Phe Cys Ser Glu Val Gln  
 245 250 255

Cys His Arg Leu Cys Phe Ala Tyr Glu Arg Met Asn Gln Asn Glu Gly  
 260 265 270

Asp Ala Leu Val Asp Ser Ile Lys Ala Lys Leu Ala Phe Leu Ser Ser  
 275 280 285

Leu Ser Thr Lys Cys Cys Ile Tyr Lys Val Pro Asn Lys Leu Arg Arg  
 290 295 300

Leu Asn Pro Asp Ala Tyr Thr Pro Arg Leu Val Ser Phe Gly Pro Leu  
 305 310 315 320

His Arg Gly Lys Glu Glu Leu Gln Ala Met Glu Asp Gln Lys Tyr Arg  
 325 330 335

Tyr Leu Leu Ser Phe Ile Pro Arg Thr Asn Ser Ser Leu Glu Asp Leu  
 340 345 350

Val Arg Leu Ala Arg Thr Trp Glu Gln Asn Ala Arg Ser Cys Tyr Ala  
 355 360 365

Glu Asp Val Lys Leu His Ser Asp Glu Phe Val Glu Met Leu Val Val  
 370 375 380

Asp Gly Ser Phe Leu Val Glu Leu Leu Leu Arg Ser His Tyr Pro Arg  
 385 390 395 400

Leu Arg Gly Glu Asn Asp Arg Ile Phe Gly Asn Ser Met Met Ile Thr  
 405 410 415

Asp Val Cys Arg Asp Met Ile Leu Ile Glu Asn Gln Leu Pro Phe Phe  
 420 425 430

Val Val Lys Glu Ile Phe Leu Leu Leu Leu Asn Tyr Tyr Gln Gln Gly  
 435 440 445

Thr Pro Ser Ile Ile Gln Leu Ala Gln Arg His Phe Ser Tyr Phe Leu

450

455

460

Ser Arg Ile Asp Asp Glu Lys Phe Ile Thr Glu Pro Glu His Phe Val  
 465 470 475 480

Asp Leu Leu Arg Ser Cys Tyr Leu Pro Gln Phe Pro Ile Lys Leu Glu  
 485 490 495

Tyr Thr Thr Val Lys Val Asp Asn Ala Pro Glu Ala Thr Glu Leu His  
 500 505 510

Thr Ala Gly Val Arg Phe Lys Pro Ala Glu Thr Ser Ser Cys Leu Leu  
 515 520 525

Asp Ile Ser Phe Ala Asp Gly Val Leu Lys Ile Pro Thr Ile Val Val  
 530 535 540

Asp Asp Leu Thr Glu Ser Leu Tyr Lys Asn Ile Ile Gly Phe Glu Gln  
 545 550 555 560

Cys Arg Cys Ser Asn Lys Asn Phe Leu Asp Tyr Ile Met Leu Leu Gly  
 565 570 575

Cys Phe Ile Lys Ser Pro Thr Asp Ala Asp Leu Leu Ile His Ser Gly  
 580 585 590

Ile Ile Val Asn Tyr Leu Gly Asn Ser Val Asp Val Ser Asn Leu Phe  
 595 600 605

Asn Ser Ile Ser Lys Glu Val Ile Tyr Asp Arg Arg Phe Tyr Phe Ser  
 610 615 620

Met Leu Ser Glu Asn Leu Gln Ala Tyr Cys Asn Thr Pro Trp Asn Arg  
 625 630 635 640

Trp Lys Ala Ile Leu Arg Arg Asp Tyr Phe His Asn Pro Trp Ala Val  
 645 650 655

Ala Ser Val Phe Ala Ala Leu Leu Leu Leu Leu Thr Phe Ile Gln  
 660 665 670

Ser Val Cys Ser Ile Leu Ala Leu  
 675 680

&lt;210&gt; 1311

&lt;211&gt; 1473



&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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<400> 1311
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atagtagagg aaccaaaagg agatgaaaaa ggtccatctg tgaaggagac gtctgagaaa    180
gagagcgagt tgttgtctga tcagcacaag cggctttcgg tccgtgacct cgctagtaaa    240
ttcgacaaga atcttgctgc agctgttagt ttggctaagt aggctaagtt aagagagggtg    300
gcttcttttg aggacatgt tatgttgaag aagctaaggg atgctttaga atacatgaga    360
ggacgcacgg atgggcaaaa caaacaggat gtggagacag ctatctccat ggtggaagct    420
ctagctgtga agttaactca gaatgaagggt gaattgattc aggagaagtt tgaagtgaag    480
aaactaggaa acttctctaa gcagacttca gaagatgcaa agaaactggt aaatcaagaa    540
aagtcattct ctgtgtctga gatcgaaact gcaagggccg ttgtgctgag acttgagagag    600
gcttttgaag aacaagaacg gatttctgaa gcttctagag ctcaagggcc ggatgtggag    660
aaattggttg aggaagttca agaggctagg caaatcaaac ggatgcatca cccaacaaag    720
gtgatgggca tgcaacacga gcttcatggt ttaagggaat gaatccaaga gaagtatatg    780
aattctgtta aacttcataa agagatagca ataatacaaga gagttgagga atccaagtct    840
tgtccatttg ttcttgaagg caaacaagaat ctcggtcttt gcttaagaat ccgtgtcaat    900
gtccaagaca atgctccaga tctttccaac tgttctattc agtggtatcg tgcagcatgt    960
gaaactagtc gcaggggaag tatatctggt gccatccaat cgatgtatgc tccagaacca   1020
tttgatgttg ggaggaatat acaggcagac attctttcaa atgggtcaaaa gttcacagtt   1080
acaaccgatg atccagttga tcctgattct ggcttgccat cccgcgtaga gtcgctgatg   1140
cgaaagtcta acagtgaaat cagtgtggtt atatcgaga tgaatggaca agactatgca   1200
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aaggctccta ccaaggcagt gttctggcaa ccaagaaaga gtctaacttt catactaacc   1380
tttgagtcag aacacgaacg taacgcagcc atagcccttg ctcgaaaata cgctttcgat   1440
tgcagtggtta cactgcttgg tccagatgat taa                                1473

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&lt;210&gt; 1312

&lt;211&gt; 490

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1312

Met Thr Lys Val Cys Pro Glu Ile Glu Gly Thr Leu Ser Leu Ser Val  
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 Tyr Lys Leu Gly Pro Asp Asn Gln Ile Val Glu Glu Pro Lys Glu Asp  
 35 40 45  
 Glu Lys Gly Pro Ser Val Lys Glu Thr Val Glu Lys Glu Ser Glu Leu  
 50 55 60  
 Leu Ser Asp Gln His Lys Arg Leu Ser Val Arg Asp Leu Ala Ser Lys  
 65 70 75 80  
 Phe Asp Lys Asn Leu Ala Ala Ala Val Ser Leu Ala Asn Glu Ala Lys  
 85 90 95  
 Leu Arg Glu Val Ala Ser Leu Glu Gly His Val Met Leu Lys Lys Leu  
 100 105 110  
 Arg Asp Ala Leu Glu Tyr Met Arg Gly Arg Thr Asp Gly Gln Asn Lys  
 115 120 125  
 Gln Asp Val Glu Thr Ala Ile Ser Met Val Glu Ala Leu Ala Val Lys  
 130 135 140  
 Leu Thr Gln Asn Glu Gly Glu Leu Ile Gln Glu Lys Phe Glu Val Lys  
 145 150 155 160  
 Lys Leu Gly Asn Phe Leu Lys Gln Thr Ser Glu Asp Ala Lys Lys Leu  
 165 170 175  
 Val Asn Gln Glu Lys Ser Phe Ser Cys Ala Glu Ile Glu Thr Ala Arg  
 180 185 190  
 Ala Val Val Leu Arg Leu Gly Glu Ala Phe Glu Glu Gln Glu Arg Ile  
 195 200 205  
 Ser Glu Ala Ser Arg Ala Gln Gly Pro Asp Val Glu Lys Leu Val Glu  
 210 215 220

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Glu Val Gln Glu Ala Arg Gln Ile Lys Arg Met His His Pro Thr Lys  
 225 230 235 240  
 Val Met Gly Met Gln His Glu Leu His Gly Leu Arg Asn Arg Ile Gln  
 245 250 255  
 Glu Lys Tyr Met Asn Ser Val Lys Leu His Lys Glu Ile Ala Ile Ile  
 260 265 270  
 Lys Arg Val Glu Glu Ser Lys Ser Cys Pro Phe Val Leu Glu Gly Lys  
 275 280 285  
 Gln Ser Leu Gly Ser Cys Leu Arg Ile Arg Val Asn Ala Gln Asp Asn  
 290 295 300  
 Ala Pro Asp Leu Ser Asn Cys Ser Ile Gln Trp Tyr Arg Ala Ala Cys  
 305 310 315 320  
 Glu Thr Ser Arg Arg Glu Ala Ile Ser Gly Ala Ile Gln Ser Met Tyr  
 325 330 335  
 Ala Pro Glu Pro Phe Asp Val Gly Arg Ile Leu Gln Ala Asp Ile Leu  
 340 345 350  
 Ser Asn Gly Gln Lys Phe Thr Val Thr Thr Asp Asp Pro Val Asp Pro  
 355 360 365  
 Asp Ser Gly Leu Pro Ser Arg Val Glu Ser Leu Met Arg Lys Ser Asn  
 370 375 380  
 Ser Glu Phe Ser Val Val Ile Ser Gln Met Asn Gly Gln Asp Tyr Ala  
 385 390 395 400  
 Ser Arg Ser His Val Phe Thr Val Gly Lys Thr Arg Ile Lys Leu Ser  
 405 410 415  
 Arg Gly Trp Ile Thr Lys Ala Arg Glu Leu Tyr Ser Thr Ser Met Gln  
 420 425 430  
 Leu Cys Gly Val Arg Gly Asn Ile Lys Ala Pro Thr Lys Ala Val Phe  
 435 440 445  
 Trp Gln Pro Arg Lys Ser Leu Thr Phe Ile Leu Thr Phe Glu Ser Glu  
 450 455 460  
 His Glu Arg Asn Ala Ala Ile Ala Leu Ala Arg Lys Tyr Ala Phe Asp  
 465 470 475 480

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Cys Ser Val Thr Leu Leu Gly Pro Asp Asp  
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<210> 1313  
<211> 1404  
<212> DNA  
<213> Arabidopsis thaliana

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gtttcaagca aagaggaaat tgattcctct gatatttcca gcgtgaagcc agttgacttg 180  
aatgatttct ttgatggaga tggcaagatt tatggttacc aaggtttgaa gataaatgta 240  
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ggagacaaag gcatacgcga cctcaaatct gctttacaga acataattgc tgagaccatt 360  
gttgatacca aggatgagtt tctgcaaac ttttcgacac agagagattt tatcagaaat 420  
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aagcaacttg ttgaggaaag gattcgtgag atcaagttgg ttgctgagaa agtctccaag 1380  
agtgggtcaa cgctaaaagt ctga 1404

&lt;210&gt; 1314

&lt;211&gt; 467

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1314

Met Val Gln Lys Gln Gln Ala Ser Ala Gly Pro Gly Thr Glu Pro Lys  
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20 25 30Asn Glu Cys Ile Lys Ile Tyr Leu Val Ser Ser Lys Glu Glu Val Asp  
35 40 45Ser Ser Asp Ile Ser Ser Val Lys Pro Val Asp Leu Asn Asp Phe Phe  
50 55 60Asp Gly Asp Gly Lys Ile Tyr Gly Tyr Gln Gly Leu Lys Ile Asn Val  
65 70 75 80Trp Ile Asn Ser Ile Ser Leu His Ser Tyr Ala Asp Ile Thr Tyr Gln  
85 90 95Ser Thr Ile Asn Gly Asp Lys Gly Ile Thr Asp Leu Lys Ser Ala Leu  
100 105 110Gln Asn Ile Phe Ala Glu Thr Ile Val Asp Thr Lys Asp Glu Phe Leu  
115 120 125Gln Thr Phe Ser Thr Gln Arg Asp Phe Ile Arg Asn Met Val Ser Asn  
130 135 140Gly Glu Val Met His Ala Gly Ala Thr Asp Gly Ser Ser Lys Asn Ala  
145 150 155 160Glu Val Val Pro Ser Asp Pro Gln Val Ile Arg Met Glu Ile Gly Ser  
165 170 175Pro Asn Ala Gly Leu Leu Tyr Ser Arg Leu Val Pro Leu Val Leu Leu  
180 185 190Phe Val Asp Gly Ser Asn Pro Ile Asp Val Thr Asp Pro Asp Trp His  
2063

195  
 200 047-E2F-PCT.ST25.txt  
 205

Leu Tyr Leu Leu Ile Gln Lys Lys Glu Glu Lys Glu Asp Pro Leu Tyr  
 210 215 220

Arg Ile Val Gly Phe Thr Ala Ile Tyr Lys Phe Tyr Arg Tyr Pro Asp  
 225 230 235 240

Arg Leu Arg Met Arg Leu Ser Gln Ile Leu Val Leu Pro Ser Phe Gln  
 245 250 255

Gly Lys Gly Leu Gly Ser Tyr Leu Met Glu Val Val Asn Asn Val Ala  
 260 265 270

Ile Thr Glu Asn Val Tyr Asp Leu Thr Val Glu Glu Pro Ser Glu Lys  
 275 280 285

Phe Gln His Ile Arg Thr Cys Ile Asp Ile Asn Arg Leu Arg Ser Phe  
 290 295 300

Asp Pro Ile Lys Pro Asp Ile Asp Ser Ala Val Gln Thr Leu Thr Lys  
 305 310 315 320

Gly Lys Leu Ser Lys Lys Ala Gln Ile Pro Arg Phe Thr Pro Pro Leu  
 325 330 335

Asn Ala Ile Glu Lys Val Arg Glu Ser Leu Lys Ile Asn Lys Lys Gln  
 340 345 350

Phe Leu Lys Cys Trp Glu Ile Leu Ile Tyr Leu Ala Leu Asp Pro Ile  
 355 360 365

Asp Lys Tyr Met Glu Asp Tyr Thr Ser Val Ile Thr Asn His Val Arg  
 370 375 380

Thr Asp Ile Leu Gly Lys Asp Ile Glu Thr Pro Lys Lys Gln Val Val  
 385 390 395 400

Asp Val Pro Ser Ser Phe Glu Pro Glu Ala Ser Phe Val Val Phe Lys  
 405 410 415

Ser Val Asn Gly Glu Glu Ala Asn Thr Asn Val Gln Val Asp Glu Asn  
 420 425 430

Lys Pro Asp Gln Glu Gln Gln Leu Lys Gln Leu Val Glu Glu Arg Ile  
 435 440 445

Arg Glu Ile Lys Leu Val Ala Glu Lys Val Ser Lys Ser Gly Gln Thr  
 450 455 460

Leu Lys Val  
 465

<210> 1315

<211> 1185

<212> DNA

<213> *Arabidopsis thaliana*

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 aagttcgacg gcggaactc tgcggtttc catctgctta ctggcgacac cggtccggct 180  
 agcttttcga ggacacgttt ggaagattcg atttatcaga acaccacacg acttcgtatc 240  
 ttttcggcga ctgctaacc tattttggct caggagattt ctgtctattt gggctctggac 300  
 cttgggaaaa tcaagattaa acgctttgct gatggtgaga tctatgttca gctacaagag 360  
 agtgaagggt gatgtgatgt gttccttgta cagcctacat gccacctgc aaatgaaaac 420  
 cttatggaat tgctcgttat gattgatgct tgtcggagag catcagccaa aactatcacg 480  
 gctgtgatcc cttactttgg ttatgcacga gctgatagaa agactcaagg acgtgaatct 540  
 attgcagcca agcttgtggc caatttgatt acacagtctg gtgcagaccg tgtccttgct 600  
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 ggccagcctg tcatacttga ttacctagca agtaaggcca tatcctctga agatttggtg 720  
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 gatgcacctt tagcaatagt tgataaaaga cgtcatgggc acaatgttgc agaggtgatg 840  
 aacttaattg gggatgttaa agggaaaagta gccataatgg tggatgacat gattgacaca 900  
 gcaggaacca taagcaaaag tgcggtctg ttacaccaag aaggagcaag agaagtatac 960  
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 tttcaagagg tgatcataac caacacgatt ccattgtcag agaagaacta ttttcctcag 1080  
 cttacagttc tctcagtagc aaaccttctt ggggagacca tatggcgtgt tcatgatgat 1140  
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<210> 1316

<211> 394

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<212> PRT

<213> Arabidopsis thaliana

<400> 1316

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Lys Cys Asn Ala Ala Asp Pro Tyr Lys Phe Asp Gly Gly Asn Ser Ala
      35           40           45

Gly Phe His Leu Leu Thr Gly Asp Thr Val Pro Ala Ser Phe Ser Arg
      50           55           60

Thr Arg Leu Glu Asp Ser Ile Tyr Gln Asn Thr Thr Arg Leu Arg Ile
 65           70           75           80

Phe Ser Gly Thr Ala Asn Pro Ile Leu Ala Gln Glu Ile Ser Cys Tyr
      85           90           95

Leu Gly Leu Asp Leu Gly Lys Ile Lys Ile Lys Arg Phe Ala Asp Gly
      100          105          110

Glu Ile Tyr Val Gln Leu Gln Glu Ser Val Arg Gly Cys Asp Val Phe
      115          120          125

Leu Val Gln Pro Thr Cys Pro Pro Ala Asn Glu Asn Leu Met Glu Leu
      130          135          140

Leu Val Met Ile Asp Ala Cys Arg Arg Ala Ser Ala Lys Thr Ile Thr
      145          150          155          160

Ala Val Ile Pro Tyr Phe Gly Tyr Ala Arg Ala Asp Arg Lys Thr Gln
      165          170          175

Gly Arg Glu Ser Ile Ala Ala Lys Leu Val Ala Asn Leu Ile Thr Gln
      180          185          190

Ser Gly Ala Asp Arg Val Leu Ala Cys Asp Leu His Ser Gly Gln Ser
      195          200          205

Met Gly Tyr Phe Asp Ile Pro Val Asp His Val Tyr Gly Gln Pro Val
      210          215          220

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Ile Leu Asp Tyr Leu Ala Ser Lys Ala Ile Ser Ser Glu Asp Leu Val  
 225 230 235 240  
 Val Val Ser Pro Asp Val Gly Gly Val Ala Arg Ala Arg Ala Phe Ala  
 245 250 255  
 Lys Lys Leu Ser Asp Ala Pro Leu Ala Ile Val Asp Lys Arg Arg His  
 260 265 270  
 Gly His Asn Val Ala Glu Val Met Asn Leu Ile Gly Asp Val Lys Gly  
 275 280 285  
 Lys Val Ala Ile Met Val Asp Asp Met Ile Asp Thr Ala Gly Thr Ile  
 290 295 300  
 Ser Lys Gly Ala Ala Leu Leu His Gln Glu Gly Ala Arg Glu Val Tyr  
 305 310 315 320  
 Ala Cys Thr Thr His Ala Val Phe Ser Pro Pro Ala Ile Ser Arg Leu  
 325 330 335  
 Ser Ser Gly Leu Phe Gln Glu Val Ile Ile Thr Asn Thr Ile Pro Leu  
 340 345 350  
 Ser Glu Lys Asn Tyr Phe Pro Gln Leu Thr Val Leu Ser Val Ala Asn  
 355 360 365  
 Leu Leu Gly Glu Thr Ile Trp Arg Val His Asp Asp Cys Ser Gly Ala  
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 Ile Glu Pro Phe Ser Thr Leu Gly Ile Asp  
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&lt;210&gt; 1317

&lt;211&gt; 1062

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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 ccggtcgaaa acatagtttt agttgggcgt acaggggaacg gcaaaagcgc cacggggaac 180

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&lt;210&gt; 1318

&lt;211&gt; 353

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1318

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Met Ala Asn Asp Gln Lys Asn Ser Glu Ser Phe Pro Ala Lys Glu Asp
1           5           10          15

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His Lys Lys Asp Asp Ala Ala Ala Pro Ala Glu Val Asp His Lys Asp
          20          25          30

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Glu Phe Ser Ala Ser Gln Pro His Pro Val Glu Asn Ile Val Leu Val
          35          40          45

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Gly Arg Thr Gly Asn Gly Lys Ser Ala Thr Gly Asn Ser Ile Val Arg
          50          55          60

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Ser Lys Val Phe Lys Ser Lys Thr Lys Ser Ser Gly Val Thr Met Glu
65          70          75          80

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Cys His Ala Val Lys Ala Val Thr Pro Glu Gly Pro Ile Leu Asn Val  
 85 90 95  
 Ile Asp Thr Pro Gly Leu Phe Asp Leu Ser Val Ser Ala Glu Phe Ile  
 100 105 110  
 Gly Lys Glu Ile Val Lys Cys Leu Thr Leu Ala Asp Gly Gly Leu His  
 115 120 125  
 Ala Val Leu Leu Val Leu Ser Val Arg Thr Arg Ile Ser Gln Glu Glu  
 130 135 140  
 Glu Met Val Leu Ser Thr Leu Gln Val Leu Phe Gly Ser Lys Ile Val  
 145 150 155 160  
 Asp Tyr Leu Ile Val Val Phe Thr Gly Gly Asp Val Leu Glu Asp Asp  
 165 170 175  
 Gly Met Thr Leu Glu Asp Tyr Leu Gly Asp Asn Met Pro Asp Phe Leu  
 180 185 190  
 Lys Arg Val Leu Ile Leu Cys Gly Gln Arg Met Ile Leu Phe Asp Asn  
 195 200 205  
 Lys Thr Lys Asp Asp Glu Lys Lys Thr Lys Gln Val His Glu Leu Leu  
 210 215 220  
 Lys Leu Ile Asp Leu Val Arg Lys Gln Asn Asn Asn Ile Pro Tyr Thr  
 225 230 235 240  
 Asp Glu Met Tyr His Met Ile Lys Glu Glu Asn Glu Arg His Lys Lys  
 245 250 255  
 Glu Gln Glu Glu Leu Glu Ser Lys Gly His Ser Glu Glu Gln Leu Ala  
 260 265 270  
 Ala Leu Met Lys Glu Leu Gln Ile Met Asn Glu Arg Asn Leu Lys Ala  
 275 280 285  
 Met Ala Glu Met Met Glu Lys Asn Met Lys Ile Ala Met Glu Ala Gln  
 290 295 300  
 Glu Lys Leu Phe Glu Gln Arg Glu Lys Ala Gln Glu Met Ser Tyr Gln  
 305 310 315 320  
 Gln Lys Met Glu Met Gln Glu Lys Leu Lys Gln Met Glu Gly Arg Met  
 325 330 335

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Arg Ala Glu Met Glu Ala Gln Met Leu Ser Arg Gln Gln Cys Ser Ile  
 340 345 350

Leu

<210> 1319

<211> 1164

<212> DNA

<213> Arabidopsis thaliana

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 ctctctctct ctctgtcgtc aacaatggat agtccgacga gcatacgtag taaaccacta 180  
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 actggtagtt tgattacaga gcaaaaaagt gatcttgaac ccggtttagg atccgagttg 480  
 acccgagaaa caacggtttc gaagcgggtg agagatatct tcaggaagag gaaacacaaa 540  
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<210> 1320

&lt;211&gt; 387

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1320

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Ser Ser Ser Phe Leu Ser Leu Thr Asn Ser Leu Ile Tyr Tyr Leu Leu  
 20 25 30

Leu Leu Leu Arg Pro Ser Lys Thr Leu Ser Leu Ser Leu Ser Ser Thr  
 35 40 45

Met Asp Ser Pro Thr Ser Ile Arg Ser Lys Pro Leu Pro Glu Thr Leu  
 50 55 60

Ser Pro Cys Gly Ser Gln Arg Arg Arg Ser Ser Cys Asp Ser Asn Pro  
 65 70 75 80

Pro Glu Phe Glu Phe Trp Arg Leu Thr Asn Ser Ser Phe Pro Gln Ala  
 85 90 95

Asp Ser Asp Leu Leu Ser Ala Asp Glu Leu Phe His Asp Gly Val Leu  
 100 105 110

Leu Pro Leu Asp Leu Leu Ser Val Lys Ser Glu Leu Gln Ser Asp Pro  
 115 120 125

Asn Ile Ala Glu Cys Asp Pro Asp Pro Ser Pro Ser Thr Gly Ser Leu  
 130 135 140

Ile Thr Glu Gln Lys Ser Asp Leu Glu Pro Gly Leu Gly Ser Glu Leu  
 145 150 155 160

Thr Arg Glu Thr Thr Val Ser Lys Arg Trp Arg Asp Ile Phe Arg Lys  
 165 170 175

Ser Glu Thr Lys Pro Pro Gly Lys Lys Glu Lys Val Lys Glu Asn Lys  
 180 185 190

Lys Glu Lys Lys Lys Thr Gly Ser Gly Pro Ser Ser Gly Ser Gly Ser  
 195 200 205

Gly Ala Glu Leu Asn Ile Asn Ile Trp Pro Phe Ser Arg Ser Arg Ser  
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215

Ala Gly Asn Asn Val Thr Arg Pro Arg Met Ser Phe Gly Ala Pro Thr  
225 230 235 240

Thr Arg Lys Val Ser Ser Ala Pro Cys Ser Arg Ser Asn Ser Thr Gly  
245 250 255

Glu Ser Lys Ser Arg Lys Trp Pro Ser Ser Pro Ser Arg Asn Gly Val  
260 265 270

His Leu Gly Arg Asn Ser Pro Val Trp Gln Val Arg Arg Gly Gly Gly  
275 280 285

Ala Pro Val Gly Lys Thr Ile Pro Glu Pro Met Gly Arg Val Val Gly  
290 295 300

Lys Arg Glu Ile Pro Glu Thr Arg Lys Gly Lys Thr Val Ile Glu Ser  
305 310 315 320

Asn Lys Ala Lys Val Leu Asn Leu Asn Val Pro Met Cys Ile Gly Tyr  
325 330 335

Arg Ser Arg Leu Ser Cys Arg Thr Glu Glu Ser Ser Gly Gly Gly Asn  
340 345 350

Ser Asn Ile Gly Ser Asp Asn Asn Asn Asn Asn Ala Asn Ala Asn  
355 360 365

Asn Pro Asn Pro Asn Gly Leu Phe Gly Phe Arg Asn Leu Phe Ile Lys  
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Lys Val Tyr  
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<210> 1321

<211> 870

<212> DNA

<213> Arabidopsis thaliana

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gtttctatct ctaatcgtgg aagggtcttc gcattctcga gcgtctctgg tgcttcgctt 180

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gctgtgacag gcctcgttta ctttctcagc aattctctcg ccattgagaa ctactttggg	360
tgttttctt cactaccaat tgtgatttct tcgataagat ggaacattgc aggtggcagg	420
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<210> 1322

<211> 289

<212> PRT

<213> Arabidopsis thaliana

<400> 1322

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			20					25					30		

Pro	Gln	Arg	His	Ile	Ile	Ser	Leu	Val	Ser	Ile	Ser	Asn	Arg	Gly	Arg
		35					40					45			

Cys	Phe	Ala	Phe	Ser	Val	Ser	Gly	Ala	Ser	Leu	Tyr	Asn	Asn	Gln	
	50				55					60					

Glu	Asp	Gly	Lys	Lys	Glu	Glu	Ser	Glu	Arg	Asn	Tyr	Ala	Ser	Thr	Lys
65					70					75					80

Glu	Gly	Asp	Glu	Val	Val	Tyr	Gln	Lys	Thr	Leu	Arg	Leu	Val	Glu	Cys
				85					90					95	

Ala	Met	Phe	Ala	Ala	Val	Thr	Gly	Leu	Val	Tyr	Phe	Leu	Ser	Asn	Ser

Leu Ala Ile Glu Asn Tyr Phe Gly Cys Phe Phe Ser Leu Pro Ile Val  
 115 120 125

Ile Ser Ser Ile Arg Trp Asn Ile Ala Gly Gly Arg Lys Thr Met Val  
 130 135 140

Ala Thr Val Met Leu Leu Phe Ile Leu Ser Gly Pro Val Lys Ala Leu  
 145 150 155 160

Thr Tyr Phe Leu Thr His Gly Leu Val Gly Leu Ala Leu Gly Ser Leu  
 165 170 175

Trp Ser Met Gly Ala Ser Trp Arg Leu Ser Ile Phe Leu Cys Thr Met  
 180 185 190

Val Arg Ala Leu Gly Leu Ile Gly Tyr Val Leu Thr Ser Ser Phe Leu  
 195 200 205

Ile Arg Glu Asn Ile Leu Ala Val Ile Thr Ile Asn Ile His Ala Ser  
 210 215 220

Leu Ser Tyr Val Phe Thr Ala Met Gly Leu Asn Ile Met Pro Ser Met  
 225 230 235 240

Ser Leu Ile Tyr Met Ile Phe Gly Thr Val Leu Leu Leu Asn Ser Gly  
 245 250 255

Phe Phe Val Leu Leu Leu His Leu Leu Tyr Ser Ile Phe Leu Thr Arg  
 260 265 270

Leu Gly Met Lys Ser Ser Leu Arg Leu Pro Ala Trp Leu Asp Lys Ala  
 275 280 285

Ile

<210> 1323

<211> 696

<212> DNA

<213> Arabidopsis thaliana

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60



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<210> 1324

<211> 231

<212> PRT

<213> Arabidopsis thaliana

<400> 1324

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Asp Trp Asp Ser Leu Ser Gln Val Asp Leu Glu Ser Gly Gly Val Pro	35 40 45
Ala Pro Glu Lys Gln Leu His Ser Gly Gly Lys Lys Arg Arg Thr Arg	50 55 60
Arg Arg Lys Arg Arg Lys Lys Lys Lys Lys Lys Gly Gly Arg Asp	65 70 75 80
Cys Arg Ile Cys His Leu Pro Leu Glu Thr Asn Lys Glu Ala Glu Asp	85 90 95
Glu Asp Glu Glu Glu Glu Asp Asp Ser Asp Asp Asp Glu Asp Glu Glu	100 105 110

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Asp Glu Glu Glu Glu Glu Glu Glu Glu Glu Tyr Tyr Gly Leu  
115 120 125

Pro Leu Gln Leu Gly Cys Ser Cys Lys Gly Asp Leu Gly Val Ala His  
130 135 140

Ser Lys Cys Ala Glu Thr Trp Phe Lys Ile Lys Gly Asn Met Thr Cys  
145 150 155 160

Glu Ile Cys Gly Ala Met Ala Leu Asn Val Ala Gly Glu Gln Ser Asn  
165 170 175

Pro Glu Ser Thr Ala Ser Thr His Ser Gln Ala Ala Ala Gly Gln Ser  
180 185 190

Leu Thr Gln Thr Glu Pro Arg Gly Ile Trp His Gly Arg Pro Val Met  
195 200 205

Asn Phe Leu Leu Ala Ala Met Val Phe Ala Phe Val Val Ser Trp Leu  
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Phe His Phe Lys Val Leu Lys  
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<211> 2157

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 1326

&lt;211&gt; 718

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1326

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20     25
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35     40     45
Pro Cys Asn Phe Ser Leu His Glu Ser Cys Ser Lys Met Lys Gln Val
50     55     60
Ile Thr His Pro Ser His Pro Ser His Thr Leu Ser Leu Leu Val Ala
65     70     75     80
Pro Val Tyr Asp Gly Gly Tyr Phe Asn Cys Asp Gly Cys Gly Ile His
85     90     95
Gly Thr Gly Phe Ser Tyr Gln Cys Ser Val Cys Asp Phe Asp Ile His
100    105    110
Ala Leu Cys Ala Tyr Lys Pro Leu Ser Ile Ile His Lys Ser His Pro
115    120    125
Gln His Asn Leu Lys Leu Ala Phe Gln Ser Pro Tyr Gly Ala Asn Lys
130    135    140
Gly Phe Ser Cys Asp Ile Cys Arg Lys Ile Gly Lys Asn Gln Trp Leu
145    150    155    160
Tyr Arg Cys Ile Pro Cys Glu Phe Asp Ala His Val Gly Cys Ile Thr
165    170    175
Gly Pro Asn Pro His Leu Leu Gln His Ser Thr Ser Ala Pro Asn Pro
180    185    190
His Thr His His Ala Gly His Pro Gln His Gln Asn Ser Leu Pro Val
195    200    205
Pro Asn Gln Gly Ser Asn Arg Val Arg Pro Met Pro Met Thr Arg Pro
210    215    220
Asn Arg Thr Ile Asn Pro Asn Arg Pro Ile Ala Gln Asn Ala Ala Val
225    230    235    240

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Asn Gly Pro Arg Arg Gln Asn Asn Asn Leu Gly Tyr Asn Ala Gln Val  
 245 250 255  
 Gly Pro Asn Gly Pro Asn Glu Leu Thr Gly Gln Gly Ser Met Asp Gly  
 260 265 270  
 Ser Gly Tyr Asn Gly Ser Ala Ser Ala Thr Asn Lys Glu Phe Asp Val  
 275 280 285  
 Asp Val Asp Val Asp Val Asp Val Asp Val Asp Val Asp Val Asp Val  
 290 295 300  
 Glu Val Glu Tyr Glu Gly Asp Val Tyr Val Glu Glu Ala Asn Asp Glu  
 305 310 315 320  
 Gly Glu Asp Val Asp Gly Asn Asp Glu Gly Glu Asp Val Asp Gly Asn  
 325 330 335  
 Gly Leu Glu Ile Val Ala Cys Val Asp Asn Leu Ser Val Ala Tyr Ser  
 340 345 350  
 Glu Ser Asp Phe Gly Ser Ser Ser Asp Ala Arg Ser Gln Cys Asn Asp  
 355 360 365  
 Leu Ser Asp Ala Asp Leu Tyr Pro Leu Ser Leu Asp Asn Thr Gln Gly  
 370 375 380  
 Pro Arg Pro Val Arg Met Asn Gln Gly Ser Gly Gly Gly Arg Lys Lys  
 385 390 395 400  
 Asn Thr Asn Gln Asn Gly Gln Ala Ser Arg Ser Lys Lys Ile Val Gly  
 405 410 415  
 Asn Gly Pro Arg Gly Gly Leu Gln Gly Ser Asn Ser Pro Ile Gln Ser  
 420 425 430  
 Pro Arg Gly Pro Gln Thr Arg Arg Val Gln Asn Val Arg Asn Asn Pro  
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 Thr Arg Gly Arg Gly Gly Ala Val Ser Val Arg Val Asn Arg Pro Arg  
 450 455 460  
 Asp Pro Ser Ala Phe Ile Ala Pro Gln Gly Phe Asn Gly Pro Ser Gly  
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 Gly Pro Ser Asn Ala Ile Asp Ser Gly Ala Asn Asn Asp Asn Tyr Asn  
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Asn Gly Lys Trp Ile Cys Pro Lys Cys Ser Pro Asn Ser Glu Ala Leu  
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Lys Pro Val Asn Arg Leu Asp Ala Ile Ala Lys Arg Ala Arg Thr Lys  
 115 120  
 Thr Lys Lys Arg Asn Ser Lys Ala Gly Pro Lys Cys Glu Arg Ala Ser  
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 Gln Ile Tyr Cys Ser Ser Ile Ile Ser Gly Glu Gln Ser Ser Glu Lys  
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 Gly Lys Ser Ile Ser Ala Glu Glu Ser Lys Ser Thr Gly Lys Glu Val  
 165 170 175  
 Tyr Ser Ser Pro Met Asp Gly Cys Ser Thr Ala Glu Leu Gly His Ala  
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 Ser Ala Asp Asp Arg Pro Asp Ser Ser Ser His Gly Glu Asp Asp Leu  
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 Gly Lys Pro Val Ile Pro Thr Ala Asp Leu Pro Ser Asp Ala Gly Leu  
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 Lys Thr Glu Thr Pro Glu Lys Val Lys Lys Leu Pro Lys Glu Glu Arg  
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 385 390 395 400  
 Asp Leu Cys Ser Asp Asn Leu Gln Ala Thr Asp Gln Arg Asp Ser Leu  
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 565 570 575  
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Trp Thr Gly Leu Ala Tyr Asp Glu Cys Thr Trp Glu Ser Leu Glu Glu  
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Arg Gly Glu Val Thr Leu Thr Glu Gln Pro Gln Glu Leu Arg Gly  
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Cys Trp His Lys Ser Lys Asn Val Ile Leu Ala Asp Glu Met Gly Leu  
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705 710 715 720

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725 730 735

Pro Asn Trp Leu Ser Glu Phe Ser Leu Trp Ala Pro Leu Leu Asn Val  
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755 760 765

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Asn Asn Ile Gly Glu Met Tyr Asn Leu Leu Asn Phe Leu Gln Pro Ser  
850 855 860

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 Glu Arg Met Val Pro Val Glu Leu Thr Ser Ile Gln Ala Glu Tyr Tyr  
 915 920 925  
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 930 935 940  
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 Val Cys Asn His Pro Tyr Leu Ile Pro Gly Thr Glu Pro Glu Ser Gly  
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 Ser Leu Glu Phe Leu His Asp Met Arg Ile Lys Ala Ser Ala Lys Leu  
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 Thr Leu Leu His Ser Met Leu Lys Val Leu His Lys Glu Gly His Arg  
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 Ile Tyr Asp Ser Asp Phe Asn Pro His Ala Asp Ile Gln Ala Met  
 1085 1090 1095  
 Asn Arg Ala His Arg Ile Gly Gln Ser Lys Arg Leu Leu Val Tyr  
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1100

1105

1110

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Glu	Ser	Asn	Gly	Asn	Leu	Asp	Val	Ile	Met	Asp	Leu	Glu	Ser	Lys
1175						1180					1185			
Ser	Arg	Lys	Lys	Gly	Gly	Gly	Leu	Gly	Asp	Val	Tyr	Gln	Asp	Lys
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Cys	Thr	Glu	Gly	Asn	Gly	Lys	Ile	Val	Trp	Asp	Asp	Ile	Ala	Ile
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1220						1225					1230			
Ala	Ala	Asp	Thr	Glu	Leu	Asp	Asn	Asp	Met	Leu	Gly	Ser	Val	Lys
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Pro	Val	Glu	Trp	Asn	Glu	Glu	Thr	Ala	Glu	Glu	Gln	Val	Gly	Ala
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Glu	Arg	Lys	Asp	Asp	Asp	Val	Val	Asn	Phe	Thr	Glu	Glu	Asn	Glu
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Trp	Asp	Arg	Leu	Leu	Arg	Met	Arg	Leu	Glu	Phe	Pro	Leu	Ser	Leu
1295						1300					1305			
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Glu	Ser	Ser	Arg	Arg	Asn	Tyr	Ser	Arg	Pro	Gly	Ser	Arg	Gln	Asn
	1490					1495					1500			
Arg	Pro	Ile	Thr	Gly	Pro	His	Phe	Pro	Phe	Asn	Leu	Pro	Gln	Thr
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Ser	Asn	Leu	Val	Glu	Arg	Glu	Ala	Asn	Asp	Gln	Glu	Pro	Pro	Met
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Asp Lys 1595	Leu Leu Pro Arg	Phe 1600	Pro Phe Gln Pro	Arg 1605	Thr Met Gly
Thr Ser 1610	His Gln Asp Ile	Met 1615	Ala Asn Leu Ser	Met 1620	Arg Lys Arg
Phe Glu 1625	Gly Thr Gly His	Ser 1630	Met Gln Asp Leu	Phe 1635	Gly Gly Thr
Pro Met 1640	Pro Phe Leu Pro	Asn 1645	Met Lys Ile Pro	Pro 1650	Met Asp Pro
Pro Val 1655	Phe Asn Gln Gln	Glu 1660	Lys Asp Leu Pro	Pro 1665	Leu Gly Leu
Asp Gln 1670	Phe Pro Ser Ala	Leu 1675	Ser Ser Ile Pro	Glu 1680	Asn His Arg
Lys Val 1685	Leu Glu Asn Ile	Met 1690	Leu Arg Thr Gly	Ser 1695	Gly Ile Gly
His Val 1700	Gln Lys Lys Lys	Thr 1705	Arg Val Asp Ala	Trp 1710	Ser Glu Asp
Glu Leu 1715	Asp Ser Leu Trp	Ile 1720	Gly Ile Arg Arg	His 1725	Gly Tyr Gly
Asn Trp 1730	Glu Thr Ile Leu	Arg 1735	Asp Pro Arg Leu	Lys 1740	Phe Ser Lys
Phe Lys 1745	Thr Pro Glu Tyr	Leu 1750	Ala Ala Arg Trp	Glu 1755	Glu Glu Gln
Arg Lys 1760	Phe Leu Asp Ser	Leu 1765	Ser Ser Leu Pro	Ser 1770	Lys Ser Ser
Arg Thr 1775	Asp Lys Ser Thr	Lys 1780	Ser Ser Leu Phe	Pro 1785	Gly Leu Pro
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 Gly Thr 1865 Ser Thr Asn Ile Pro 1870 Asn Glu Lys Pro Phe 1875 Pro Leu Asn  
 Ser Leu 1880 Gly Met Gly Asn Leu 1885 Gly Ser Leu Gly Leu 1890 Asp Ser Leu  
 Ser Ser 1895 Leu Asn Thr Leu Arg 1900 Ala Glu Glu Lys Arg 1905 Asp Ala Ile  
 Lys Arg 1910 Gly Lys Leu Pro Leu 1915 Phe Leu Asp Met Pro 1920 Leu Pro Gln  
 Met Leu 1925 Asp Ser Ser Asn Asn 1930 Val Phe Leu Gly Arg 1935 Ser Ala Asn  
 Pro Ser 1940 Phe Leu His Pro Asn 1945 Arg Gly Leu Asn Pro 1950 Ser Asn Pro  
 Met Gly 1955 Arg Asp Ile Met Gly 1960 Ile Ser Ser Ser Glu 1965 Asn Lys Leu  
 Pro His 1970 Trp Leu Arg Asn Val 1975 Val Thr Val Pro Thr 1980 Val Lys Ser  
 Pro Glu 1985 Pro Pro Thr Leu Pro 1990 Pro Thr Val Ser Ala 1995 Ile Ala Gln  
 Ser Val 2000 Arg Val Leu Tyr Gly 2005 Glu Asp Ser Thr Thr 2010 Ile Pro Pro  
 Phe Val 2015 Ile Pro Glu Pro Pro 2020 Pro Pro Ala Pro Arg 2025 Asp Pro Arg  
 His Ser 2030 Leu Arg Lys Lys Arg 2035 Lys Arg Lys Leu His 2040 Ser Ser Ser  
 Gln Lys Thr Thr Asp Ile Gly Ser Ser Ser His Asn 2097 Ala Val Glu

2045

2050

Ser Ser Ser Gln Gly Asn Pro Gln Thr Ser Ala Thr Pro Pro Leu  
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Pro Pro Pro Ser Leu Ala Gly Glu Thr Ser Gly Ser Ser Gln Pro  
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Lys Leu Pro Pro His Asn Leu Asn Ser Thr Glu Pro Leu Ser Ser  
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Glu Ala Ile Ile Ile Pro Pro Pro Glu Glu Asp Ser Val Ile Ala  
2105 2110 2115

Ala Ala Pro Ser Glu Ala Pro Gly Pro Ser Leu Glu Gly Ile Thr  
2120 2125 2130

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Glu Thr Ile Asn Gln Asp Gly Asp Leu Asp Pro Glu Thr Asp Glu  
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<212> DNA

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actgt	gagtc	aaagt	gggtgt	ttgga	tgagc	gaatga	acag	atga	agaaa	300
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aac	agttg	ctt	tc	tggtata	aa	ccat	caact	gat	ctttagt	720
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<213> Arabidopsis thaliana

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Gln	Leu	Arg	Asn	Ala	Gly	Ile	Asn	Val	Phe	Ile	Asp	Thr	Lys	Glu	Gln
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Lys	Gly	Arg	Arg	Leu	Gln	Tyr	Leu	Phe	Thr	Arg	Ile	Lys	Lys	Ser	Lys
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Leu	Asp	Glu	Leu	Val	Thr	Met	Asn	Glu	Gln	Met	Lys	Glu	Lys	Lys	Leu
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Val	Val	Ile	Pro	Ile	Phe	Tyr	Asn	Val	Arg	Ser	Asp	Asp	Val	Lys	Arg
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Ala Ala Asn Pro Asp Gly Glu Gly Asn Leu Asp Gly Glu Phe Ser Leu  
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Pro Phe Lys Gln Leu Lys Gln Asn His Ala Gly Glu Pro Glu Arg Val  
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Glu Gly Trp Glu Arg Ala Leu Arg Ser Val Thr Lys Arg Ile Gly Phe  
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Ser Arg Ser Asn Ser Lys Tyr Lys His Asp Thr Asp Phe Val Leu Asp  
165 170 175

Ile Val Lys Glu Val Lys Lys Gln Leu Asn Ile Pro Thr Asp Asn Ser  
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Phe Ser Phe Phe Ile Ala Pro Lys Tyr Leu Pro Asp Gln Lys Phe Phe  
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Ala Ser Gly Arg Ser Lys Gly Tyr Gly Phe Val Thr Phe Arg Glu Ala  
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Glu Ala Ala Arg Ser Ala Cys Val Asp Ala Thr Pro Val Ile Asp Gly  
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Pro Ser Thr Pro Asn His Gly Gly Gly Arg Ile Asn Asn Met Arg  
 100 105 110

Val Met Met Ser Thr Met Gln Thr Gly Phe Gly Pro Pro Pro Pro  
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Gln Pro Pro Thr Phe Thr His Tyr Pro His Leu Pro Leu Asn Leu Phe  
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Gly Tyr Ser Pro Tyr Ser Pro Asp Tyr Ser Ser Phe Pro Thr Asn Leu  
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145 150 155 160

Tyr Gly Met Tyr Gly Cys Thr Ser Gly Gly Gln Tyr Gly Val Tyr Gly  
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180 185 190

Thr Pro Phe Tyr Pro Cys Gly Gly His Gly Gly Val Gln Phe Ser  
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Gln Pro Gln Pro Phe Tyr His His Leu Ser Ser Tyr Asn Pro His His  
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Leu Ala Gly Asp Gly Phe Ser Phe Ser Val Pro Ser Arg Ala Ala Ser	
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Asn Gln Leu Tyr Val Pro Glu Leu Asp Arg Ile Val Leu Lys Asp Lys	
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Ser Thr Leu Arg Pro Phe Ala Ser Val Ser Ser Val Arg Lys Thr Thr  
130 135 140

Ile Thr Thr Arg Ile Leu Ala Leu Ile His Gln Leu Cys Leu Arg Asn  
145 150 155 160

Ile His Val Thr Lys Arg Asp Leu Phe Tyr Thr Asp Val Lys Leu Phe  
165 170 175

Gln Asp Gln Thr Gln Ser Asp Ala Val Leu Asp Asp Val Ser Cys Met  
180 185 190

Leu Gly Cys Thr Arg Ser Ser Leu Asn Val Ile Ala Ala Glu Lys Gly  
195 200 205

Val Val Val Gly Arg Leu Ile Phe Ser Asp Asn Gly Asp Met Ile Asp  
210 215 220

Cys Thr Lys Met Gly Met Gly Gly Lys Ala Ile Pro Pro Asn Ile Asp  
225 230 235 240

Arg Val Gly Asp Met Gln Ser Asp Ala Met Phe Ile Leu Leu Val Glu  
245 250 255

Lys Asp Ala Ala Tyr Met Arg Leu Ala Glu Asp Arg Phe Tyr Asn Arg  
260 265 270

Phe Pro Cys Ile Ile Val Thr Ala Lys Gly Gln Pro Asp Val Ala Thr  
275 280 285

Arg Leu Phe Leu Arg Lys Met Lys Met Glu Leu Lys Leu Pro Val Leu  
290 295 300

Ala Leu Val Asp Ser Asp Pro Tyr Gly Leu Lys Ile Leu Ser Val Tyr  
305 310 315 320

Gly Cys Gly Ser Lys Asn Met Ser Tyr Asp Ser Ala Asn Leu Thr Thr  
325 330 335

Pro Asp Ile Lys Trp Leu Gly Ile Arg Pro Ser Asp Leu Asp Lys Tyr  
340 345 350

Lys Ile Pro Glu Gln Cys Arg Leu Pro Met Thr Glu Gln Asp Ile Lys  
355 360 365

Thr Gly Lys Asp Met Leu Glu Glu Asp Phe Val Lys Lys Asn Pro Gly  
370 375 380

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Trp Val Glu Glu Leu Asn Leu Met Val Lys Thr Lys Gln Lys Ala Glu  
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Ile Gln Ala Leu Ser Ser Phe Gly Phe Gln Tyr Leu Ser Glu Val Tyr  
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<211> 1458

<212> DNA

<213> Arabidopsis thaliana

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 gagaaattaa tggatttcgt gaagaagctc gagtcgcat gtgtaaacac tgttgagaca 1320  
 gggaaaatga ccaaggatct tgcctttta atccatggtc ccaaggtgag tagggatttg 1380  
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<210> 1338

<211> 485

<212> PRT

<213> Arabidopsis thaliana

<400> 1338

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 35 40 45

Arg Asn Arg Val Thr Phe Pro Val Gln Phe His Arg Ala Ser Ala Val  
 50 55 60

Arg Cys Phe Ala Ser Ser Gly Gly Ser Asp Arg Ile Gln Val Gln Asn  
 65 70 75 80

Pro Ile Val Glu Met Asp Gly Asp Glu Met Thr Arg Val Ile Trp Ser  
 85 90 95

Met Ile Lys Glu Lys Leu Ile Leu Pro Tyr Leu Asp Leu Asp Ile Lys  
 100 105 110

Tyr Phe Asp Leu Gly Ile Leu Asn Arg Asp Ala Thr Asp Asp Lys Val  
 115 120 125

Thr Val Glu Ser Ala Glu Ala Ala Leu Lys Tyr Asn Val Ala Ile Lys  
 130 135 140

Cys Ala Thr Ile Thr Pro Asp Glu Gly Arg Val Lys Glu Phe Gly Leu  
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Lys Ser Met Trp Arg Ser Pro Asn Gly Thr Ile Arg Asn Ile Leu Asp  
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 Gly Thr Val Phe Arg Glu Pro Ile Met Cys Ser Asn Ile Pro Arg Leu  
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 Val Pro Gly Trp Glu Lys Pro Ile Cys Ile Gly Arg His Ala Phe Gly  
 195 200 205  
 Asp Gln Tyr Arg Ala Thr Asp Thr Val Ile Lys Gly Pro Gly Lys Leu  
 210 215 220  
 Lys Met Val Phe Val Pro Glu Asp Gly Asn Ala Pro Val Glu Leu Asp  
 225 230 235 240  
 Val Tyr Asp Phe Lys Gly Pro Gly Val Ala Leu Ala Met Tyr Asn Val  
 245 250 255  
 Asp Glu Ser Ile Arg Ala Phe Ala Glu Ser Ser Met Ala Met Ala Leu  
 260 265 270  
 Thr Lys Lys Trp Pro Leu Tyr Leu Ser Thr Lys Asn Thr Ile Leu Lys  
 275 280 285  
 Lys Tyr Asp Gly Arg Phe Lys Asp Ile Phe Gln Glu Val Tyr Glu Ala  
 290 295 300  
 Asn Trp Lys Gln Lys Phe Glu Glu His Ser Ile Trp Tyr Glu His Arg  
 305 310 315 320  
 Leu Ile Asp Asp Met Val Ala Tyr Ala Val Lys Ser Glu Gly Gly Tyr  
 325 330 335  
 Val Trp Ala Cys Lys Asn Tyr Asp Gly Asp Val Gln Ser Asp Leu Leu  
 340 345 350  
 Ala Gln Gly Phe Gly Ser Leu Gly Leu Met Thr Ser Val Leu Leu Ser  
 355 360 365  
 Ala Asp Gly Lys Thr Leu Glu Ser Glu Ala Ala His Gly Thr Val Thr  
 370 375 380  
 Arg His Phe Arg Leu His Gln Lys Gly Gln Glu Thr Ser Thr Asn Ser  
 385 390 395 400  
 Ile Ala Ser Ile Phe Ala Trp Thr Arg Gly Leu Glu His Arg Ala Lys

Leu Asp Lys Asn Glu Lys Leu Met Asp Phe Val Lys Lys Leu Glu Ser  
 420 425 430

Ser Cys Val Asn Thr Val Glu Thr Gly Lys Met Thr Lys Asp Leu Ala  
 435 440 445

Leu Leu Ile His Gly Pro Lys Val Ser Arg Asp Leu Phe Leu Asn Thr  
 450 455 460

Glu Glu Phe Ile Asp Ala Val Ala Ser Lys Leu Lys Thr Gln Phe Lys  
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Glu Leu Pro Leu Val  
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<211> 1857

<212> DNA

<213> Arabidopsis thaliana

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 gggatttcgg tttcccacaa ggagagaagc agaggattca tctgcaaggc ggaagctgcg 240  
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047-E2F-PCT.ST25.txt

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<211> 618

<212> PRT

<213> Arabidopsis thaliana

<400> 1340

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Pro Ile Gly Val Arg Arg Leu Leu Gln Pro Ser His Gly Leu Lys Gln  
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Arg Leu Phe Thr Thr Asn Leu Pro Ala Leu Ser Leu Ser Ser Asn Gly  
35 40 45

His Lys Lys Phe Gln Ala Phe Gln Gln Ile Pro Leu Gly Ile Ser Val  
50 55 60

Ser His Lys Glu Arg Ser Arg Gly Phe Ile Cys Lys Ala Glu Ala Ala  
Page 2109

65                      70                      75                      80  
 Ala Ala Gly Gly Gly Asn Val Phe Asp Glu Gly Asp Thr Ala Ala Met  
                                  85                      90                      95  
 Ala Val Ser Pro Lys Ile Phe Gly Val Glu Val Thr Thr Leu Lys Lys  
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 Ile Val Pro Leu Gly Leu Met Phe Phe Cys Ile Leu Phe Asn Tyr Thr  
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 Ile Leu Arg Asp Thr Lys Asp Val Leu Val Val Thr Ala Lys Gly Ser  
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 Ser Ala Glu Ile Ile Pro Phe Leu Lys Thr Trp Val Asn Leu Pro Met  
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 Ala Ile Gly Phe Met Leu Leu Tyr Thr Lys Leu Ser Asn Val Leu Ser  
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 Lys Lys Ala Leu Phe Tyr Thr Val Ile Val Pro Phe Ile Val Tyr Phe  
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 Gly Ala Phe Gly Phe Val Met Tyr Pro Leu Ser Asn Leu Ile His Pro  
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 Glu Ala Leu Ala Asp Lys Leu Leu Ala Thr Leu Gly Pro Arg Phe Met  
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 Gly Pro Leu Ala Ile Met Arg Ile Trp Ser Phe Cys Leu Phe Tyr Val  
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 Met Ala Glu Leu Trp Gly Ser Val Val Val Ser Val Leu Phe Trp Gly  
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 Phe Ala Asn Gln Ile Thr Thr Val Asp Glu Ala Lys Lys Phe Tyr Pro  
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 Leu Phe Gly Leu Gly Ala Asn Val Ala Leu Ile Phe Ser Gly Arg Thr  
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 Val Lys Tyr Phe Ser Asn Met Arg Lys Asn Leu Gly Pro Gly Val Asp  
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 Gly Trp Ala Val Ser Leu Lys Ala Met Met Ser Ile Val Val Gly Met  
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 Met Glu Ser Leu Lys Phe Leu Val Ser Ser Pro Tyr Ile Arg Asp Leu  
 355 360 365  
 Ala Thr Leu Val Val Ala Tyr Gly Ile Ser Ile Asn Leu Val Glu Val  
 370 375 380  
 Thr Trp Lys Ser Lys Leu Lys Ala Gln Phe Pro Ser Pro Asn Glu Tyr  
 385 390 395 400  
 Ser Ala Phe Met Gly Asp Phe Ser Thr Cys Thr Gly Ile Ala Thr Phe  
 405 410 415  
 Thr Met Met Leu Leu Ser Gln Tyr Val Phe Lys Lys Tyr Gly Trp Gly  
 420 425 430  
 Val Ala Ala Lys Ile Thr Pro Thr Val Leu Leu Leu Thr Gly Val Ala  
 435 440 445  
 Phe Phe Ser Leu Ile Leu Phe Gly Gly Pro Phe Ala Pro Leu Val Ala  
 450 455 460  
 Lys Leu Gly Met Thr Pro Leu Leu Ala Ala Val Tyr Val Gly Ala Leu  
 465 470 475 480  
 Gln Asn Ile Phe Ser Lys Ser Ala Lys Tyr Ser Leu Phe Asp Pro Cys  
 485 490 495  
 Lys Glu Met Ala Tyr Ile Pro Leu Asp Glu Asp Thr Lys Val Lys Gly  
 500 505 510  
 Lys Ala Ala Ile Asp Val Val Cys Asn Pro Leu Gly Lys Ser Gly Gly  
 515 520 525  
 Ala Leu Ile Gln Gln Phe Met Ile Leu Thr Phe Gly Ser Leu Ala Asn  
 530 535 540  
 Ser Thr Pro Tyr Leu Gly Val Ile Leu Leu Gly Ile Val Thr Ala Trp  
 545 550 555 560  
 Leu Ala Ala Ala Lys Ser Leu Glu Gly Gln Phe Asn Thr Leu Met Ser  
 565 570 575

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Glu Glu Glu Leu Glu Arg Glu Met Glu Arg Ala Ser Ser Val Lys Ile  
580 585 590

Pro Val Val Ser Gln Glu Asp Ala Pro Ser Gly Glu Thr Thr Ser Gln  
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Leu Ser Glu Lys Ser Thr Pro Thr Gly Ile  
610 615

<210> 1341

<211> 645

<212> DNA

<213> Arabidopsis thaliana

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<211> 214

<212> PRT

<213> Arabidopsis thaliana

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Leu Tyr Lys Gln Gln Ala Glu Phe Leu Leu Lys Gln Val Ser Lys Asp  
 35 40 45

Ser Leu Leu His Pro Lys Met Thr Ile Leu Leu Asp His His Ser Phe  
 50 55 60

His Phe Leu Val Glu Lys Lys Ile Cys Tyr Ile Ala Leu Ser Asp Ser  
 65 70 75 80

Ser Tyr Pro Arg Lys Leu Leu Phe Asn Tyr Leu Gln Asn Leu Asn Lys  
 85 90 95

Glu Leu Asp Lys Leu Asp Glu Lys Ala Leu Ile Gln Lys Ile Ser Lys  
 100 105 110

Pro Tyr Ser Phe Ile Arg Phe Gly Lys Ile Ile Gly Arg Ile Arg Lys  
 115 120 125

Gln Tyr Ile Asp Thr Arg Thr Gln Ala Asn Leu Ser Lys Leu Asn Ala  
 130 135 140

Leu Arg Lys Gln Glu Leu Asp Val Val Thr Glu His Leu Asn Asp Ile  
 145 150 155 160

Ile Gln Arg Gln Gln Ile Leu Gly Val Leu Arg Ser Ser Asn Asp Cys  
 165 170 175

Phe Asn His Leu Glu Leu Thr Met Ser Ser Gly Tyr Phe Val Lys Met  
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 195 200 205

Lys Leu Asp Tyr Asp Arg  
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<210> 1343

<211> 2256

<212> DNA

<213> Arabidopsis thaliana

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gttacgcaag	ttctttccac	agctgtcatt	ttaggtcttc	tctggtggca	gtcgacatt	1620
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gatctccctc	tcgactttat	tctaccttct	ctcttccttc	ttgtcgtcta	tttcatgaca	1860
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<211> 751

<212> PRT

<213> *Arabidopsis thaliana*

<400> 1344

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 35 40 45

Gly Gly Gly Gly Thr Leu Ser Arg Lys Ser Ser Arg Arg Leu Met Gly  
 50 55 60

Met Ser Pro Gly Arg Ser Ser Gly Ala Gly Thr His Ile Arg Lys Ser  
 65 70 75 80

Arg Ser Ala Gln Leu Lys Leu Glu Leu Glu Val Ser Ser Gly Ala  
 85 90 95

Ala Leu Ser Arg Ala Ser Ser Ala Ser Leu Gly Leu Ser Phe Ser Phe  
 100 105 110

Thr Gly Phe Ala Met Pro Pro Glu Glu Ile Ser Asp Ser Lys Pro Phe  
 115 120 125

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 130 135 140

Pro Lys Phe Gln Ala Glu Pro Thr Leu Pro Ile Phe Leu Lys Phe Arg  
 Page 2115

145                      150                      160

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Lys Glu Ile Leu Thr Gly Ile Ser Gly Ser Val Asn Pro Gly Glu Val  
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Leu Ala Leu Met Gly Pro Ser Gly Ser Gly Lys Thr Thr Leu Leu Ser  
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Leu Leu Ala Gly Arg Ile Ser Gln Ser Ser Thr Gly Gly Ser Val Thr  
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Tyr Asn Asp Lys Pro Tyr Ser Lys Tyr Leu Lys Ser Lys Ile Gly Phe  
225                      230                      235                      240

Val Thr Gln Asp Asp Val Leu Phe Pro His Leu Thr Val Lys Glu Thr  
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Leu Thr Tyr Ala Ala Arg Leu Arg Leu Pro Lys Thr Leu Thr Arg Glu  
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Gln Lys Lys Gln Arg Ala Leu Asp Val Ile Gln Glu Leu Gly Leu Glu  
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Arg Cys Gln Asp Thr Met Ile Gly Gly Ala Phe Val Arg Gly Val Ser  
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Gly Gly Glu Arg Lys Arg Val Ser Ile Gly Asn Glu Ile Ile Ile Asn  
305                      310                      315                      320

Pro Ser Leu Leu Leu Leu Asp Glu Pro Thr Ser Gly Leu Asp Ser Thr  
                                 325                      330                      335

Thr Ala Leu Arg Thr Ile Leu Met Leu His Asp Ile Ala Glu Ala Gly  
                                 340                      345                      350

Lys Thr Val Ile Thr Thr Ile His Gln Pro Ser Ser Arg Leu Phe His  
                                 355                      360                      365

Arg Phe Asp Lys Leu Ile Leu Leu Gly Arg Gly Ser Leu Leu Tyr Phe  
                                 370                      375                      380

Gly Lys Ser Ser Glu Ala Leu Asp Tyr Phe Ser Ser Ile Gly Cys Ser  
385                      390                      395                      400

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Pro Leu Ile Ala Met Asn Pro Ala Glu Phe Leu Leu Asp Leu Ala Asn  
405 410 415

Gly Asn Ile Asn Asp Ile Ser Val Pro Ser Glu Leu Asp Asp Arg Val  
420 425 430

Gln Val Gly Asn Ser Gly Arg Glu Thr Gln Thr Gly Lys Pro Ser Pro  
435 440 445

Ala Ala Val His Glu Tyr Leu Val Glu Ala Tyr Glu Thr Arg Val Ala  
450 455 460

Glu Gln Glu Lys Lys Lys Leu Leu Asp Pro Val Pro Leu Asp Glu Glu  
465 470 475 480

Ala Lys Ala Lys Ser Thr Arg Leu Lys Arg Gln Trp Gly Thr Cys Trp  
485 490 495

Trp Glu Gln Tyr Cys Ile Leu Phe Cys Arg Gly Leu Lys Glu Arg Arg  
500 505 510

His Glu Tyr Phe Ser Trp Leu Arg Val Thr Gln Val Leu Ser Thr Ala  
515 520 525

Val Ile Leu Gly Leu Leu Trp Trp Gln Ser Asp Ile Arg Thr Pro Met  
530 535 540

Gly Leu Gln Asp Gln Ala Gly Leu Leu Phe Phe Ile Ala Val Phe Trp  
545 550 555 560

Gly Phe Phe Pro Val Phe Thr Ala Ile Phe Ala Phe Pro Gln Glu Arg  
565 570 575

Ala Met Leu Asn Lys Glu Arg Ala Ala Asp Met Tyr Arg Leu Ser Ala  
580 585 590

Tyr Phe Leu Ala Arg Thr Thr Ser Asp Leu Pro Leu Asp Phe Ile Leu  
595 600 605

Pro Ser Leu Phe Leu Leu Val Val Tyr Phe Met Thr Gly Leu Arg Ile  
610 615 620

Ser Pro Tyr Pro Phe Phe Leu Ser Met Leu Thr Val Phe Leu Cys Ile  
625 630 635 640

Ile Ala Ala Gln Gly Leu Gly Leu Ala Ile Gly Ala Ile Leu Met Asp  
645 650 655

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Leu Lys Lys Ala Thr Thr Leu Ala Ser Val Thr Val Met Thr Phe Met  
660 665 670

Leu Ala Gly Gly Phe Phe Val Lys Lys Val Pro Val Phe Ile Ser Trp  
675 680 685

Ile Arg Tyr Leu Ser Phe Asn Tyr His Thr Tyr Lys Leu Leu Leu Lys  
690 695 700

Val Gln Tyr Gln Asp Phe Ala Val Ser Ile Asn Gly Met Arg Ile Asp  
705 710 715 720

Asn Gly Leu Thr Glu Val Ala Ala Leu Val Val Met Ile Phe Gly Tyr  
725 730 735

Arg Leu Leu Ala Tyr Leu Ser Leu Arg Gln Met Lys Ile Val Thr  
740 745 750

<210> 1345

<211> 444

<212> DNA

<213> Arabidopsis thaliana

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aaggagccaa ataacacag agacgaagca gtgtctccaa atagagctgg gaggcacaga 120  
gaccgagccg taatagatca caaaagcgaa gaaagagaga gagaagcgt acagaatggt 180  
acagagatga gtgggattga gagatctgag ggtgagtggg cgccgccggt ggaaggaatt 240  
accgacgagg agctgcgctc tactcgcgcg atggatgac tagggtttgc tttgttcgcg 300  
agttggggga gaaagacaga gagacagaga atgggatctc ctgacataag gatttatatt 360  
tttaatccga taataaatg aataataatg gaaactagaa tccggtttgg tctagaatgg 420  
aaaccaagcg gttttggttc ttga 444

<210> 1346

<211> 147

<212> PRT

<213> Arabidopsis thaliana

&lt;400&gt; 1346

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1 5 10 15Glu Lys His Thr Lys Glu Pro Asn Lys His Arg Asp Glu Ala Val Leu  
20 25 30Gln Asn Arg Ala Gly Arg His Arg Asp Arg Ala Val Ile Asp His Lys  
35 40 45Ser Glu Glu Arg Glu Arg Glu Ser Val Gln Asn Val Thr Glu Met Ser  
50 55 60Gly Ile Glu Arg Ser Glu Gly Glu Trp Ser Pro Pro Val Glu Gly Ile  
65 70 75 80Thr Asp Glu Glu Leu Pro Ser His Ser Pro Met Asp Asp Leu Gly Phe  
85 90 95Ala Leu Phe Ala Ser Trp Gly Arg Lys Thr Glu Arg Gln Arg Met Gly  
100 105 110Ser Pro Asp Ile Arg Ile Tyr Ile Phe Asn Pro Ile Lys Lys Ile Ile  
115 120 125Ile Met Glu Thr Arg Ile Arg Phe Gly Leu Glu Trp Lys Pro Ser Gly  
130 135 140Phe Gly Ser  
145

&lt;210&gt; 1347

&lt;211&gt; 963

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1347

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gaggatttcg agtactatat gcagtcttac tccattatac tcggccggaa ttctaagaaa	120
gccaccgtcg acgttgatct ctatccctc ggcggtggga tgaacatctc gcgcaaccac	180
gctcgatct tctatgactt cactagacga cgcttctctc tcgaggtcct tggcaaaaat	240
ggctgcctcg ttgaaggtgt tcttcattct cctgggaatc ctaacgtcaa gctcgattca	300

caagaccttt tgcagatcgg agacaaagag ttctactttc tcctaccggt tcggagcatc 360  
 ttaggcgggc cgttgggacc taggcaccac gtctctgggc aaacaagtgt tgttcatac 420  
 cataattatc agtcgggtcc aggttctggg tcgggtaaga agggcgctcag gagtagagag 480  
 ttgtatgagt acgatgatga agatgatgat gacgacgacg atgaggaggga cgaatagaga 540  
 ggaagtggaa agaaaacaag gagagatgga catgaagtag tatatgcttc cggagagaa 600  
 aagagagagg gaagatcaaa ggtagatcgt gaagctgatg atcaacaatt ttgcagctg 660  
 gaggaaaaag atgttgtatc gtctgttgcc actgtgcttt ccgatttgtg tggtcgggga 720  
 gagtggatgc ctatggaaaa acttcattcg gtgatattaa aggagtatgg aaacgtatgg 780  
 catcacagtc gagtaagaag atacctatca caagaagact gggctatccc tgaagcaaaa 840  
 ggtaaaccat ggtacgggtt gctgatgctg ctgagaaaaat acccgagaca ttctgcatc 900  
 aacacgagat caaagggaag agttaccctt gaattcgttt ccctcggtac cctactctca 960  
 tga 963

<210> 1348

<211> 320

<212> PRT

<213> *Arabidopsis thaliana*

<400> 1348

Met Ala Thr Ala Val Gly Gly Gly Ser Asp Val Glu Val Gly Phe Ala  
 1 5 10 15

Lys Leu Gln Gly Glu Asp Phe Glu Tyr Tyr Met Gln Ser Tyr Ser Ile  
 20 25 30

Ile Leu Gly Arg Asn Ser Lys Lys Ala Thr Val Asp Val Asp Leu Ser  
 35 40 45

Ser Leu Gly Gly Gly Met Asn Ile Ser Arg Asn His Ala Arg Ile Phe  
 50 55 60

Tyr Asp Phe Thr Arg Arg Arg Phe Ser Leu Glu Val Leu Gly Lys Asn  
 65 70 75 80

Gly Cys Leu Val Glu Gly Val Leu His Leu Pro Gly Asn Pro Asn Val  
 85 90 95

Lys Leu Asp Ser Gln Asp Leu Leu Gln Ile Gly Asp Lys Glu Phe Tyr  
 100 105 110

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Phe Leu Leu Pro Val Arg Ser Ile Leu Gly Gly Pro Leu Gly Pro Arg  
 115 120 125  
 His His Val Ser Gly Gln Thr Ser Val Val Pro Tyr His Asn Tyr Gln  
 130 135 140  
 Ser Gly Pro Gly Ser Gly Ser Gly Lys Lys Gly Val Arg Ser Arg Glu  
 145 150 155 160  
 Leu Tyr Glu Tyr Asp Asp Glu Asp Asp Asp Asp Asp Asp Glu Glu  
 165 170 175  
 Asp Asp Met Arg Gly Ser Gly Lys Lys Thr Arg Arg Asp Gly His Glu  
 180 185 190  
 Val Val Tyr Ala Ser Gly Glu Lys Lys Arg Glu Gly Arg Ser Lys Val  
 195 200 205  
 Asp Arg Glu Ala Asp Asp Gln Gln Phe Leu Gln Leu Glu Glu Lys Asp  
 210 215 220  
 Val Val Ser Ser Val Ala Thr Val Leu Ser Asp Leu Cys Gly Pro Gly  
 225 230 235 240  
 Glu Trp Met Pro Met Glu Lys Leu His Ser Val Ile Leu Lys Glu Tyr  
 245 250 255  
 Gly Asn Val Trp His His Ser Arg Val Arg Arg Tyr Leu Ser Gln Glu  
 260 265 270  
 Asp Trp Ala Ile Pro Glu Ala Lys Gly Lys Pro Trp Tyr Gly Leu Leu  
 275 280 285  
 Met Leu Leu Arg Lys Tyr Pro Glu His Phe Val Ile Asn Thr Arg Ser  
 290 295 300  
 Lys Gly Arg Val Thr Leu Glu Phe Val Ser Leu Val Thr Leu Leu Ser  
 305 310 315 320

<210> 1349

<211> 510

<212> DNA

<213> Arabidopsis thaliana

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 gatgtgagtt tggaccaata caaaggcaaa actcttttgg ttgtaaactg tgcctccaaa 120  
 tgtggtctga cggatgcgaa ctacaaggaa ctgaatgttc tgtacgagaa atacaaggag 180  
 caaggttggt agatattagc attcccgtgt aatcagttct taggacaaga accaggaaac 240  
 aatgaagaga ttcaacaaac tgtctgcacc aggttcaaaag ctgaattccc catctttgac 300  
 aaggtggatg tgaacggtaa gaacacggca ccattataca agtacttgaa agcagagaaa 360  
 ggaggtttgc tcattgatgc tatcaaatgg aacttcacca aattcttggg ttctcctgat 420  
 ggcaagggtc tacagagata ttctccaga acctctctc ttcaattcga gaaggacatt 480  
 caaactgcgt tgggacagc ctcttcttaa 510

<210> 1350

<211> 169

<212> PRT

<213> Arabidopsis thaliana

<400> 1350

Met Ala Asp Glu Ser Pro Lys Ser Ile Tyr Asp Phe Thr Val Lys Asp  
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Ile Gly Gly Asn Asp Val Ser Leu Asp Gln Tyr Lys Gly Lys Thr Leu  
 20 25 30

Leu Val Val Asn Val Ala Ser Lys Cys Gly Leu Thr Asp Ala Asn Tyr  
 35 40 45

Lys Glu Leu Asn Val Leu Tyr Glu Lys Tyr Lys Glu Gln Gly Leu Glu  
 50 55 60

Ile Leu Ala Phe Pro Cys Asn Gln Phe Leu Gly Gln Glu Pro Gly Asn  
 65 70 75 80

Asn Glu Glu Ile Gln Gln Thr Val Cys Thr Arg Phe Lys Ala Glu Phe  
 85 90 95

Pro Ile Phe Asp Lys Val Asp Val Asn Gly Lys Asn Thr Ala Pro Leu  
 100 105 110

Tyr Lys Tyr Leu Lys Ala Glu Lys Gly Gly Leu Leu Ile Asp Ala Ile  
 115 120 125



Lys Trp Asn Phe Thr Lys Phe Leu Val Ser Pro Asp Gly Lys Val Leu  
 130 135 140

Gln Arg Tyr Ser Pro Arg Thr Ser Pro Leu Gln Phe Glu Lys Asp Ile  
 145 150 155 160

Gln Thr Ala Leu Gly Gln Ala Ser Ser  
 165

<210> 1351

<211> 2178

<212> DNA

<213> Arabidopsis thaliana

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 tcaactattg gtaacagtgt gaaggtggag ctatcggaga cagctagagc cgggtgtaat 300  
 gctagtagtg attgggttat ggagagtatg aacaaaggca ctgatagtta tgggtgttact 360  
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 ccacactccg ccacaagagc cgccatgctt gtacgaatca acactctcct ccaaggattt 540  
 tccggtatcc gatttgagat tctcgaagca attaccagtt tcctcaacaa caacatcact 600  
 ccatctctcc cctccgtgg tacaatcacc gcctcggag atctcgttcc tctctcctac 660  
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 ttaacagcag aggaagcttt caaattagca ggaatcagct ccggaattctt tgatctccag 780  
 cctaaggaag gtctcgcgct agtcaatggc acggcgggtg gatctggaat ggcgtcaatg 840  
 gtgttattcg aaacgaatgt tctctctggt ttggctgaga tttgtcggc ggttttcgca 900  
 gaggtgatga gtggaagcc tgagttcacc gatcatctca ctacagact taaacatcat 960  
 cccgggtcaaa tcgaagcggc ggcgataatg gagcatatcc tcgacggaag ctgctacatg 1020  
 aaattagctc agaagcttca cgagatggat ccgttacaga aacctaaaca agatcgttac 1080  
 gctcttcgta cttctcctca atggttaggt cctcaaatcg aagtgatccg ttacgcaacg 1140

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aatcgatcg agcgtgagat taactccgtc aacgataatc cgttgatcga tgtttcgagg 1200
aacaaggcga ttcacgggtg taacttccaa ggaacaccaa tcggagtttc aatggataac 1260
acgagattgg cgatagcagc gattggtaaa ctcatgtttg ctcaattctc agagcttgtg 1320
aatgatttct acaacaatgg ttaccctcg aatctaaccg cttcgaggaa tccaagtttg 1380
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tctttgggac taatctcgtc tcgcaaaact tctgaagctg ttgatattct caagcttatg 1560
tcaacaacgt tcctcgttgc gatttgtcaa gctgtggatt tgagacattt ggaggagaat 1620
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gtgacttcaa tcttccataa gattggagct ttcgaggagg agcttaaggc agtgctaccg 1920
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atcaaggaat gtaggtcgta tccattgtat agattcgtga gggaagagct tggaaacagag 2040
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atttgtgaag gtaaaatcat tgatccgatg atggaatgtc tcaacgagtg gaacggagct 2160
cccattccaa tatgttaa 2178

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&lt;210&gt; 1352

&lt;211&gt; 725

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1352

```

Met Glu Ile Asn Gly Ala His Lys Ser Asn Gly Gly Gly Val Asp Ala
1           5           10           15

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Met Leu Cys Gly Gly Asp Ile Lys Thr Lys Asn Met Val Ile Asn Ala
20           25           30

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```

Glu Asp Pro Leu Asn Trp Gly Ala Ala Ala Glu Gln Met Lys Gly Ser
35           40           45

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His Leu Asp Glu Val Lys Arg Met Val Ala Glu Phe Arg Lys Pro Val
50           55           60

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Val Asn Leu Gly Gly Glu Thr Leu Thr Ile Gly Gln Val Ala Ala Ile  
 65 70 75 80  
 Ser Thr Ile Gly Asn Ser Val Lys Val Glu Leu Ser Glu Thr Ala Arg  
 85 90 95  
 Ala Gly Val Asn Ala Ser Ser Asp Trp Val Met Glu Ser Met Asn Lys  
 100 105 110  
 Gly Thr Asp Ser Tyr Gly Val Thr Thr Gly Phe Gly Ala Thr Ser His  
 115 120 125  
 Arg Arg Thr Lys Asn Gly Val Ala Leu Gln Lys Glu Leu Ile Arg Phe  
 130 135 140  
 Leu Asn Ala Gly Ile Phe Gly Ser Thr Lys Glu Thr Ser His Thr Leu  
 145 150 155 160  
 Pro His Ser Ala Thr Arg Ala Ala Met Leu Val Arg Ile Asn Thr Leu  
 165 170 175  
 Leu Gln Gly Phe Ser Gly Ile Arg Phe Glu Ile Leu Glu Ala Ile Thr  
 180 185 190  
 Ser Phe Leu Asn Asn Asn Ile Thr Pro Ser Leu Pro Leu Arg Gly Thr  
 195 200 205  
 Ile Thr Ala Ser Gly Asp Leu Val Pro Leu Ser Tyr Ile Ala Gly Leu  
 210 215  
 Leu Thr Gly Arg Pro Asn Ser Lys Ala Thr Gly Pro Asn Gly Glu Ala  
 225 230 235 240  
 Leu Thr Ala Glu Glu Ala Phe Lys Leu Ala Gly Ile Ser Ser Gly Phe  
 245 250 255  
 Phe Asp Leu Gln Pro Lys Glu Gly Leu Ala Leu Val Asn Gly Thr Ala  
 260 265 270  
 Val Gly Ser Gly Met Ala Ser Met Val Leu Phe Glu Thr Asn Val Leu  
 275 280 285  
 Ser Val Leu Ala Glu Ile Leu Ser Ala Val Phe Ala Glu Val Met Ser  
 290 295 300  
 Gly Lys Pro Glu Phe Thr Asp His Leu Thr His Arg Leu Lys His His  
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305 310 320  
Pro Gly Gln Ile Glu Ala Ala Ala Ile Met Glu His Ile Leu Asp Gly  
325 330  
Ser Ser Tyr Met Lys Leu Ala Gln Lys Leu His Glu Met Asp Pro Leu  
340 345  
Gln Lys Pro Lys Gln Asp Arg Tyr Ala Leu Arg Thr Ser Pro Gln Trp  
355 360  
Leu Gly Pro Gln Ile Glu Val Ile Arg Tyr Ala Thr Lys Ser Ile Glu  
370 375  
Arg Glu Ile Asn Ser Val Asn Asp Asn Pro Leu Ile Asp Val Ser Arg  
385 390 395  
Asn Lys Ala Ile His Gly Gly Asn Phe Gln Gly Thr Pro Ile Gly Val  
405 410 415  
Ser Met Asp Asn Thr Arg Leu Ala Ile Ala Ala Ile Gly Lys Leu Met  
420 425 430  
Phe Ala Gln Phe Ser Glu Leu Val Asn Asp Phe Tyr Asn Asn Gly Leu  
435 440 445  
Pro Ser Asn Leu Thr Ala Ser Arg Asn Pro Ser Leu Asp Tyr Gly Phe  
450 455 460  
Lys Gly Ala Glu Ile Ala Met Ala Ser Tyr Cys Ser Glu Leu Gln Tyr  
465 470 475 480  
Leu Ala Asn Pro Val Thr Ser His Val Gln Ser Ala Glu Gln His Asn  
485 490 495  
Gln Asp Val Asn Ser Leu Gly Leu Ile Ser Ser Arg Lys Thr Ser Glu  
500 505 510  
Ala Val Asp Ile Leu Lys Leu Met Ser Thr Thr Phe Leu Val Ala Ile  
515 520 525  
Cys Gln Ala Val Asp Leu Arg His Leu Glu Glu Asn Leu Arg Gln Thr  
530 535 540  
Val Lys Asn Thr Val Ser Gln Val Ala Lys Lys Val Leu Thr Thr Gly  
545 550 555 560

Val Asn Gly Glu Leu His Pro Ser Arg Phe Cys Glu Lys Asp Leu Leu  
565 570 575

Lys Val Val Asp Arg Glu Gln Val Tyr Thr Tyr Ala Asp Asp Pro Cys  
580 585 590

Ser Ala Thr Tyr Pro Leu Ile Gln Lys Leu Arg Gln Val Ile Val Asp  
595 600 605

His Ala Leu Ile Asn Gly Glu Ser Glu Lys Asn Ala Val Thr Ser Ile  
610 615 620

Phe His Lys Ile Gly Ala Phe Glu Glu Glu Leu Lys Ala Val Leu Pro  
625 630 635 640

Lys Glu Val Glu Ala Ala Arg Ala Ala Tyr Asp Asn Gly Thr Ser Ala  
645 650 655

Ile Pro Asn Arg Ile Lys Glu Cys Arg Ser Tyr Pro Leu Tyr Arg Phe  
660 665 670

Val Arg Glu Glu Leu Gly Thr Glu Leu Leu Thr Gly Glu Lys Val Thr  
675 680 685

Ser Pro Gly Glu Glu Phe Asp Lys Val Phe Thr Ala Ile Cys Glu Gly  
690 695 700

Lys Ile Ile Asp Pro Met Met Glu Cys Leu Asn Glu Trp Asn Gly Ala  
705 710 715 720

Pro Ile Pro Ile Cys  
725

<210> 1353

<211> 816

<212> DNA

<213> Arabidopsis thaliana

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ggtatcggtt ctaaaggat caagacggac ctgaaaggat actgtgaaag ctggaggatc 180  
aacgtggaag ttcacaacat cagaaagttc gatgtggtgc ctcaagagtg tgtatcgcac 240

attaaggatt acatgacgtc atcgcagtac aaggatgacg tggcgagaac cgttgatgag	300
gtcattcttc atttctgggag catgtgctgt agcaagtcta agtgtgacgg catggacgct	360
tggatctttg atatcgatga cacgcttctc tctaccatcc cttaccacaa gaaaaatggc	420
ttcttcggag gagagaaatt gaactcaacg aaattcgagg attggataca gaagaagaaa	480
gcaccagcag tgccacacat gaagaaattg taccacgaca tcagagaaag aggcattaag	540
atcttcttga tctcttcccg gaaagaatat ctccaggtctg ccaccgtcga caacctcatc	600
caagccggtt actatggctg gtccaaccta atgctcaggg ggctagaaga tcagcaaaag	660
gaagtgaaac aatacaagtc agagaagaga aaatggctaa tgagtcttgg ttacagagtc	720
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ttcaagctcc ctaactccat ctactatgtc gcctga	816

&lt;210&gt; 1354

&lt;211&gt; 271

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1354

Met Asp Arg Thr	Met Phe Leu Ser Leu Thr	Ile Ala Ser Leu	Leu Val
1	5	10	15

Gly Val Val	Ser Ala Gly Asp Trp	Asn Ile Leu Asn Gln	Leu Arg Gly
	20	25	30

Leu Gly	Ser Ser Ser Ser	Gln Asn Gly	Ile Val Ser	Lys Gly Ile Lys
	35	40		45

Thr Asp	Leu Lys Gly Tyr	Cys Glu Ser Trp Arg	Ile Asn Val	Glu Val
	50	55	60	

His Asn Ile Arg Lys	Phe Asp Val Val	Pro Gln Glu Cys Val	Ser His
65	70	75	80

Ile Lys Asp Tyr	Met Thr Ser Ser	Gln Tyr Lys Asp Asp Val	Ala Arg
	85	90	95

Thr Val Asp	Glu Val Ile Leu His	Phe Gly Ser Met Cys	Cys Ser Lys
	100	105	110

Ser Lys Cys Asp Gly Met Asp	Ala Trp Ile Phe Asp	Ile Asp Asp Thr
115	120	125

Leu Leu Ser Thr Ile Pro Tyr His Lys Lys Asn Gly Phe Phe Gly Gly  
 130 135 140

Glu Lys Leu Asn Ser Thr Lys Phe Glu Asp Trp Ile Gln Lys Lys Lys  
 145 150 155 160

Ala Pro Ala Val Pro His Met Lys Lys Leu Tyr His Asp Ile Arg Glu  
 165 170 175

Arg Gly Ile Lys Ile Phe Leu Ile Ser Ser Arg Lys Glu Tyr Leu Arg  
 180 185 190

Ser Ala Thr Val Asp Asn Leu Ile Gln Ala Gly Tyr Tyr Gly Trp Ser  
 195 200 205

Asn Leu Met Leu Arg Gly Leu Glu Asp Gln Gln Lys Glu Val Lys Gln  
 210 215 220

Tyr Lys Ser Glu Lys Arg Lys Trp Leu Met Ser Leu Gly Tyr Arg Val  
 225 230 235 240

Trp Gly Val Met Gly Asp Gln Trp Ser Ser Phe Ala Gly Cys Pro Leu  
 245 250 255

Pro Arg Arg Thr Phe Lys Leu Pro Asn Ser Ile Tyr Tyr Val Ala  
 260 265 270

<210> 1355

<211> 1434

<212> DNA

<213> Arabidopsis thaliana

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 agtgtgattc agtgttcaat aggagacaag gctcctattg ctttgtgttc attgttgcca 180  
 aacaaaatcg aatgttgccc tctgaatctt gagtttgacg atgatgatga gccagtggaa 240  
 ttcaccgtga ctggtgacag aagtatccac ttgtctggat tcttgagata ttatcaggac 300  
 gatgaagatg attatgagca tgatgaagat gattcagatg gtattgatgt tggtgagtc 360  
 gaggaagacg attcgtgtga atatgatagt gaagaggatg agcaattgga tgaatttgaa 420

gacttccttg atagcaatct tgaagggtat cggaaatgctg ctgccccaaa gagtggagtt	480
ataattgagg agatagaaga tgaagagaaa cctgccaaag ataataaggc aaacaaaacc	540
aagaagaaga gtcaagctag cgaagggtgag aatgcaaaga aacaatcgt tgccatagag	600
ggtgcccatg ttccagtttt ggaaagcgaa gatgaagacg aagacggttt acctattcct	660
aaagaaaaat catctgaaat agagaatgcg tcagggtgaga agatggttgt agataatgac	720
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ttaaattgagg aagctggaca agttcagacg ggaaatgttc tgaagaagca ggatattagc	900
caaatctctt caaacacaaa agctcaagat ggaactgcaa acaatgccat gagtgaaagc	960
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agtgacgaag ctgcagaaat ttctgttact gttgagaagc aaacccagc ggatccaag	1080
tcttctcaag tacggacata cccaaatggg ctcatgtgtg aagagttgag catgggaaaa	1140
cccaacggca agagagctga tcctggaaaa acggtttctg tgcgtatat tggaaaactt	1200
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aaaaggaagc ttacaattcc tccatcaatg gggatggtg tgaaggggtg tgggtggcag	1380
attcctccta attcttggct gacttttgat gtcgaactga ttaatgttca ataa	1434

&lt;210&gt; 1356

&lt;211&gt; 477

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1356

Met Gly Phe Trp	Gly Leu Glu Val	Lys Pro Gly Lys	Pro Gln Ala Tyr
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Asn Pro Lys	Asn Glu Gln Gly Lys	Ile His Val Thr Gln Ala Thr Leu
20	25	30

Gly Thr	Gly Leu Ser Lys Glu Lys	Ser Val Ile Gln Cys Ser Ile Gly
35	40	45

Asp Lys Ala Pro Ile Ala	Leu Cys Ser Leu Leu	Pro Asn Lys Ile Glu
50	55	60



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Cys Cys Pro Leu Asn Leu Glu Phe Asp Asp Asp Asp Glu Pro Val Glu  
 65 70 75 80  
 Phe Thr Val Thr Gly Asp Arg Ser Ile His Leu Ser Gly Phe Leu Glu  
 85 90 95  
 Tyr Tyr Gln Asp Asp Glu Asp Asp Tyr Glu His Asp Glu Asp Asp Ser  
 100 105 110  
 Asp Gly Ile Asp Val Gly Glu Ser Glu Glu Asp Asp Ser Cys Glu Tyr  
 115 120 125  
 Asp Ser Glu Glu Asp Glu Gln Leu Asp Glu Phe Glu Asp Phe Leu Asp  
 130 135 140  
 Ser Asn Leu Glu Arg Tyr Arg Asn Ala Ala Ala Pro Lys Ser Gly Val  
 145 150 155 160  
 Ile Ile Glu Glu Ile Glu Asp Glu Glu Lys Pro Ala Lys Asp Asn Lys  
 165 170 175  
 Ala Lys Gln Thr Lys Lys Lys Ser Gln Ala Ser Glu Gly Glu Asn Ala  
 180 185 190  
 Lys Lys Gln Ile Val Ala Ile Glu Gly Ala His Val Pro Val Leu Glu  
 195 200 205  
 Ser Glu Asp Glu Asp Glu Asp Gly Leu Pro Ile Pro Lys Gly Lys Ser  
 210 215 220  
 Ser Glu Val Glu Asn Ala Ser Gly Glu Lys Met Val Val Asp Asn Asp  
 225 230 235 240  
 Glu Gln Gly Ser Asn Lys Lys Arg Lys Ala Lys Ala Ala Glu Gln Asp  
 245 250 255  
 Asp Gly Gln Glu Ser Ala Asn Lys Ser Lys Lys Lys Lys Asn Gln Lys  
 260 265 270  
 Glu Lys Lys Lys Gly Glu Asn Val Leu Asn Glu Glu Ala Gly Gln Val  
 275 280 285  
 Gln Thr Gly Asn Val Leu Lys Lys Gln Asp Ile Ser Gln Ile Ser Ser  
 290 295 300  
 Asn Thr Lys Ala Gln Asp Gly Thr Ala Asn Asn Ala Met Ser Glu Ser  
 305 310 315 320

047-E2F-PCT.ST25.txt

Ser Lys Thr Pro Asp Lys Ser Ala Glu Lys Lys Thr Lys Asn Lys Lys  
325 330 335

Lys Lys Lys Pro Ser Asp Glu Ala Ala Glu Ile Ser Gly Thr Val Glu  
340 345 350

Lys Gln Thr Pro Ala Asp Ser Lys Ser Ser Gln Val Arg Thr Tyr Pro  
355 360 365

Asn Gly Leu Ile Val Glu Glu Leu Ser Met Gly Lys Pro Asn Gly Lys  
370 375 380

Arg Ala Asp Pro Gly Lys Thr Val Ser Val Arg Tyr Ile Gly Lys Leu  
385 390 395 400

Gln Lys Asn Gly Lys Ile Phe Asp Ser Asn Ile Gly Lys Ser Pro Phe  
405 410 415

Lys Phe Arg Leu Gly Ile Gly Ser Val Ile Lys Gly Trp Asp Val Gly  
420 425 430

Val Asn Gly Met Arg Val Gly Asp Lys Arg Lys Leu Thr Ile Pro Pro  
435 440 445

Ser Met Gly Tyr Gly Val Lys Gly Ala Gly Gly Gln Ile Pro Pro Asn  
450 455 460

Ser Trp Leu Thr Phe Asp Val Glu Leu Ile Asn Val Gln  
465 470 475

<210> 1357

<211> 864

<212> DNA

<213> Arabidopsis thaliana

<400> 1357  
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ttcgaacccg gcgagctcaa atcttggtct ttctacagag cagggatagc tgagtgcata 180  
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aatatgtgtg cctctgttgg aatccaaggc atcgcttggg cttttggtgg catgatcttt 300  
gctctgtttt actgtactgc tggaatctca ggaggacata ttaatccggc ggtgactttt 360  
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## 047-E2F-PCT.ST25.txt

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 ctcgagagctg ccatcatcta caacaaggat catgcttggg atgaccattg gatcttctgg 780  
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 attcctttca agtccaagac ataa 864

&lt;210&gt; 1358

&lt;211&gt; 287

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1358

Met Glu Gly Lys Glu Glu Asp Val Asn Val Gly Ala Asn Lys Phe Pro  
 1 5 10 15

Glu Arg Gln Pro Ile Gly Thr Ala Ala Gln Thr Glu Ser Lys Asp Tyr  
 20 25 30

Lys Glu Pro Pro Ala Pro Phe Phe Glu Pro Gly Glu Leu Lys Ser  
 35 40 45

Trp Ser Phe Tyr Arg Ala Gly Ile Ala Glu Phe Ile Ala Thr Phe Leu  
 50 55 60

Phe Leu Tyr Val Thr Val Leu Thr Val Met Gly Val Lys Arg Ala Pro  
 65 70 75 80

Asn Met Cys Ala Ser Val Gly Ile Gln Gly Ile Ala Trp Ala Phe Gly  
 85 90 95

Gly Met Ile Phe Ala Leu Val Tyr Cys Thr Ala Gly Ile Ser Gly Gly  
 100 105 110

His Ile Asn Pro Ala Val Thr Phe Gly Leu Phe Leu Ala Arg Lys Leu  
 115 120 125

047-E2F-PCT.ST25.txt

Ser Leu Thr Arg Ala Leu Phe Tyr Ile Val Met Gln Cys Leu Gly Ala  
130 135 140

Ile Cys Gly Ala Gly Val Val Lys Gly Phe Gln Pro Gly Leu Tyr Gln  
145 150 155 160

Thr Asn Gly Gly Gly Ala Asn Val Val Ala His Gly Tyr Thr Lys Gly  
165 170 175

Ser Gly Leu Gly Ala Glu Ile Val Gly Thr Phe Val Leu Val Tyr Thr  
180 185 190

Val Phe Ser Ala Thr Asp Ala Lys Arg Ser Ala Arg Asp Ser His Val  
195 200 205

Pro Ile Leu Ala Pro Leu Pro Ile Gly Phe Ala Val Phe Leu Val His  
210 215 220

Leu Ala Thr Ile Pro Ile Thr Gly Thr Gly Ile Asn Pro Ala Arg Ser  
225 230 235 240

Leu Gly Ala Ala Ile Ile Tyr Asn Lys Asp His Ala Trp Asp Asp His  
245 250 255

Trp Ile Phe Trp Val Gly Pro Phe Ile Gly Ala Ala Leu Ala Leu  
260 265 270

Tyr His Gln Ile Val Ile Arg Ala Ile Pro Phe Lys Ser Lys Thr  
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<210> 1359

<211> 1479

<212> DNA

<213> Arabidopsis thaliana

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cttcttgagg attaccatct cgttgagaag cttgccaatt tcgacaggga acgattcca 180  
gagcgtgtgg ttcatgccag aggagccagt gctaaagggt tctttgaggt cactcatgat 240  
atctctaacc tcacttgtgc tgactttctc cgagctcccg gtgttcagac tctgtcatt 300  
gtccggttct ccaccgttat ccatgagcgt ggaagtcccg agaccttgag agaccctcgt 360  
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gaaagtttga acatgtttac tttcctcttc gatgatatcg gtatcccaca agattacagg 600
cacatggatg gttcagggtg caatacatat atgtttgatca acaaagctgg caaagctcac 660
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<210> 1360

<211> 492

<212> PRT

<213> Arabidopsis thaliana

<400> 1360

Met Asp Pro Tyr Lys Tyr Arg Pro Ala Ser Ser Tyr Asn Ser Pro Phe  
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Phe Thr Thr Asn Ser Gly Ala Pro Val Trp Asn Asn Asn Ser Ser Met  
20 25 30

Thr Val Gly Pro Arg Gly Pro Ile Leu Leu Glu Asp Tyr His Leu Val  
35 40 45

047-E2F-PCT.ST25.txt

Glu Lys Leu Ala Asn Phe Asp Arg Glu Arg Ile Pro Glu Arg Val Val  
 50 55 60  
 His Ala Arg Gly Ala Ser Ala Lys Gly Phe Phe Glu Val Thr His Asp  
 65 70 75 80  
 Ile Ser Asn Leu Thr Cys Ala Asp Phe Leu Arg Ala Pro Gly Val Gln  
 85 90 95  
 Thr Pro Val Ile Val Arg Phe Ser Thr Val Ile His Glu Arg Gly Ser  
 100 105 110  
 Pro Glu Thr Leu Arg Asp Pro Arg Gly Phe Ala Val Lys Phe Tyr Thr  
 115 120 125  
 Arg Glu Gly Asn Phe Asp Leu Val Gly Asn Asn Phe Pro Val Phe Phe  
 130 135 140  
 Ile Arg Asp Gly Met Lys Phe Pro Asp Met Val His Ala Leu Lys Pro  
 145 150 155 160  
 Asn Pro Lys Ser His Ile Gln Glu Asn Trp Arg Ile Leu Asp Phe Phe  
 165 170 175  
 Ser His His Pro Glu Ser Leu Asn Met Phe Thr Phe Leu Phe Asp Asp  
 180 185 190  
 Ile Gly Ile Pro Gln Asp Tyr Arg His Met Asp Gly Ser Gly Val Asn  
 195 200 205  
 Thr Tyr Met Leu Ile Asn Lys Ala Gly Lys Ala His Tyr Val Lys Phe  
 210 215 220  
 His Trp Lys Pro Thr Cys Gly Val Lys Ser Leu Leu Glu Glu Asp Ala  
 225 230 235 240  
 Ile Arg Val Gly Gly Thr Asn His Ser His Ala Thr Gln Asp Leu Tyr  
 245 250 255  
 Asp Ser Ile Ala Ala Gly Asn Tyr Pro Glu Trp Lys Leu Phe Ile Gln  
 260 265 270  
 Ile Ile Asp Pro Ala Asp Glu Asp Lys Phe Asp Phe Asp Pro Leu Asp  
 275 280 285  
 Val Thr Lys Thr Trp Pro Glu Asp Ile Leu Pro Leu Gln Pro Val Gly  
 290 295 300

047-E2F-PCT.ST25.txt

Arg Met Val Leu Asn Lys Asn Ile Asp Asn Phe Phe Ala Glu Asn Glu  
305 310 315 320

Gln Leu Ala Phe Cys Pro Ala Ile Ile Val Pro Gly Ile His Tyr Ser  
325 330 335

Asp Asp Lys Leu Leu Gln Thr Arg Val Phe Ser Tyr Ala Asp Thr Gln  
340 345 350

Arg His Arg Leu Gly Pro Asn Tyr Leu Gln Leu Pro Val Asn Ala Pro  
355 360 365

Lys Cys Ala His His Asn Asn His His Glu Gly Phe Met Asn Phe Met  
370 375 380

His Arg Asp Glu Glu Val Asn Tyr Phe Pro Ser Arg Tyr Asp Gln Val  
385 390 395 400

Arg His Ala Glu Lys Tyr Pro Thr Pro Pro Ala Val Cys Ser Gly Lys  
405 410 415

Arg Glu Arg Cys Ile Ile Glu Lys Glu Asn Asn Phe Lys Glu Pro Gly  
420 425 430

Glu Arg Tyr Arg Thr Phe Thr Pro Glu Arg Gln Glu Arg Phe Ile Gln  
435 440 445

Arg Trp Ile Asp Ala Leu Ser Asp Pro Arg Ile Thr His Glu Ile Arg  
450 455 460

Ser Ile Trp Ile Ser Tyr Trp Ser Gln Ala Asp Lys Ser Leu Gly Gln  
465 470 475 480

Lys Leu Ala Ser Arg Leu Asn Val Arg Pro Ser Ile  
485 490

<210> 1361

<211> 1206

<212> DNA

<213> Arabidopsis thaliana

<400> 1361  
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&lt;210&gt; 1362

&lt;211&gt; 401

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1362

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Met Ala Leu Lys Phe Asn Pro Leu Val Ala Ser Gln Pro Tyr Lys Phe
1           5           10          15

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Pro Ser Ser Thr Arg Pro Pro Thr Pro Ser Phe Arg Ser Pro Lys Phe
                20          25          30

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Leu Cys Leu Ala Ser Ser Ser Pro Ala Leu Ser Ser Gly Pro Lys Glu
          35          40          45

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047-E2F-PCT.ST25.txt

Val Glu Ser Leu Lys Lys Pro Phe Thr Pro Pro Arg Glu Val His Val  
50 55 60

Gln Val Leu His Ser Met Pro Pro Gln Lys Ile Glu Ile Phe Lys Ser  
65 70 75 80

Met Glu Asn Trp Ala Glu Glu Asn Leu Leu Ile His Leu Lys Asp Val  
85 90 95

Glu Lys Ser Trp Gln Pro Gln Asp Phe Leu Pro Asp Pro Ala Ser Asp  
100 105 110

Gly Phe Glu Asp Gln Val Arg Glu Leu Arg Glu Arg Ala Arg Glu Leu  
115 120 125

Pro Asp Asp Tyr Phe Val Val Leu Val Gly Asp Met Ile Thr Glu Glu  
130 135 140

Ala Leu Pro Thr Tyr Gln Thr Met Leu Asn Thr Leu Asp Gly Val Arg  
145 150 155 160

Asp Glu Thr Gly Ala Ser Pro Thr Ser Trp Ala Ile Trp Thr Arg Ala  
165 170 175

Trp Thr Ala Glu Glu Asn Arg His Gly Asp Leu Leu Asn Lys Tyr Leu  
180 185 190

Tyr Leu Ser Gly Arg Val Asp Met Arg Gln Ile Glu Lys Thr Ile Gln  
195 200 205

Tyr Leu Ile Gly Ser Gly Met Asp Pro Arg Thr Glu Asn Asn Pro Tyr  
210 215 220

Leu Gly Phe Ile Tyr Thr Ser Phe Gln Glu Arg Ala Thr Phe Ile Ser  
225 230 235 240

His Gly Asn Thr Ala Arg Gln Ala Lys Glu His Gly Asp Ile Lys Leu  
245 250 255

Ala Gln Ile Cys Gly Thr Ile Ala Ala Asp Glu Lys Arg His Glu Thr  
260 265 270

Ala Tyr Thr Lys Ile Val Glu Lys Leu Phe Glu Ile Asp Pro Asp Gly  
275 280 285

Thr Val Met Ala Phe Ala Asp Met Met Arg Lys Lys Ile Ser Met Pro  
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290

295

300

Ala His Leu Met Tyr Asp Gly Arg Asn Asp Asn Leu Phe Asp Asn Phe  
305 310 315 320

Ser Ser Val Ala Gln Arg Leu Gly Val Tyr Thr Ala Lys Asp Tyr Ala  
325 330 335

Asp Ile Leu Glu Phe Leu Val Gly Arg Trp Lys Ile Gln Asp Leu Thr  
340 345 350

Gly Leu Ser Gly Glu Gly Asn Lys Ala Gln Asp Tyr Leu Cys Gly Leu  
355 360 365

Ala Pro Arg Ile Lys Arg Leu Asp Glu Arg Ala Gln Ala Arg Ala Lys  
370 375 380

Lys Gly Pro Lys Ile Pro Phe Ser Trp Ile His Asp Arg Glu Val Gln  
385 390 395 400

Leu

&lt;210&gt; 1363

&lt;211&gt; 2301

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1363

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gcactcactg ttccgacaac agatgatcct tcattacctg tcttaacatt tcgcatgtgg	240
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acagaacctc tcaactatct tgccatctcc gctcaaatcg ccgtcgtagc acttggtcgt	360
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## 047-E2F-PCT.ST25.txt

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&lt;210&gt; 1364

&lt;211&gt; 766

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1364

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 20 25 30  
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 35 40 45  
 Glu Glu Glu Glu Glu Asn Ser Pro Ile Arg Gln Val Ala Leu Thr Val  
 50 55 60  
 Pro Thr Thr Asp Asp Pro Ser Leu Pro Val Leu Thr Phe Arg Met Trp  
 65 70 75 80  
 Val Leu Gly Thr Leu Ser Cys Ile Leu Leu Ser Phe Leu Asn Gln Phe  
 85 90 95  
 Phe Trp Tyr Arg Thr Glu Pro Leu Thr Ile Ser Ala Ile Ser Ala Gln  
 100 105 110  
 Ile Ala Val Val Pro Leu Gly Arg Leu Met Ala Ala Lys Ile Thr Asp  
 115 120 125  
 Arg Val Phe Phe Gln Gly Ser Lys Trp Gln Phe Thr Leu Asn Pro Gly  
 130 135 140  
 Pro Phe Asn Val Lys Glu His Val Leu Ile Thr Ile Phe Ala Asn Ala  
 145 150 155 160  
 Gly Ala Gly Ser Val Tyr Ala Ile His Val Val Thr Val Val Lys Ala  
 165 170 175  
 Phe Tyr Met Lys Asn Ile Thr Phe Phe Val Ser Phe Ile Val Ile Val  
 180 185 190  
 Thr Thr Gln Val Leu Gly Phe Gly Trp Ala Gly Ile Phe Arg Lys Tyr  
 195 200 205  
 Leu Val Glu Pro Ala Ala Met Trp Trp Pro Ala Asn Leu Val Gln Val  
 210 215 220

047-E2F-PCT.ST25.txt

Ser Leu Phe Arg Ala Leu His Glu Lys Glu Glu Arg Thr Lys Gly Gly  
 225 230 235 240

Leu Thr Arg Thr Gln Phe Phe Val Ile Ala Phe Val Cys Ser Phe Ala  
 245 250 255

Tyr Tyr Val Phe Pro Gly Tyr Leu Phe Gln Ile Met Thr Ser Leu Ser  
 260 265 270

Trp Val Cys Trp Phe Phe Pro Ser Ser Val Met Ala Gln Gln Ile Gly  
 275 280 285

Ser Gly Leu His Gly Leu Gly Val Gly Ala Ile Gly Leu Asp Trp Ser  
 290 295 300

Thr Ile Ser Ser Tyr Leu Gly Ser Pro Leu Ala Ser Pro Trp Phe Ala  
 305 310 315 320

Thr Ala Asn Val Gly Val Gly Phe Val Leu Val Ile Tyr Val Leu Val  
 325 330 335

Pro Ile Cys Tyr Trp Leu Asp Val Tyr Lys Ala Lys Thr Phe Pro Ile  
 340 345 350

Phe Ser Ser Ser Leu Phe Ser Ser Gln Gly Ser Lys Tyr Asn Ile Thr  
 355 360 365

Ser Ile Ile Asp Ser Asn Phe His Leu Asp Leu Pro Ala Tyr Glu Arg  
 370 375 380

Gln Gly Pro Leu Tyr Leu Cys Thr Phe Phe Ala Ile Ser Tyr Gly Val  
 385 390 395 400

Gly Phe Ala Ala Leu Ser Ala Thr Ile Met His Val Ala Leu Phe His  
 405 410 415

Gly Arg Glu Ile Trp Glu Gln Ser Lys Glu Ser Phe Lys Glu Lys Lys  
 420 425 430

Leu Asp Val His Ala Arg Leu Met Gln Arg Tyr Lys Gln Val Pro Glu  
 435 440 445

Trp Trp Phe Trp Cys Ile Leu Val Thr Asn Val Gly Ala Thr Ile Phe  
 450 455 460

Ala Cys Glu Tyr Tyr Asn Asp Gln Leu Gln Leu Pro Trp Trp Gly Val  
 465 470 475 480

047-E2F-PCT.ST25.txt

Leu Leu Ala Cys Thr Val Ala Ile Ile Phe Thr Leu Pro Ile Gly Ile  
 485 490 495  
 Ile Thr Ala Ile Thr Asn Gln Ala Pro Gly Leu Asn Ile Ile Thr Glu  
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 Tyr Ile Ile Gly Tyr Ile Tyr Pro Gly Tyr Pro Val Ala Asn Met Cys  
 515 520 525  
 Phe Lys Val Tyr Gly Tyr Ile Ser Met Gln Gln Ala Ile Thr Phe Leu  
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 Gln Asp Phe Lys Leu Gly His Tyr Met Lys Ile Pro Pro Arg Thr Met  
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 Phe Met Ala Gln Ile Val Gly Thr Leu Ile Ser Cys Phe Val Tyr Leu  
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 Thr Thr Ala Trp Trp Leu Met Glu Thr Ile Pro Asn Ile Cys Asp Ser  
 580 585 590  
 Val Thr Asn Ser Val Trp Thr Cys Pro Ser Asp Lys Val Phe Tyr Asp  
 595 600 605  
 Ala Ser Val Ile Trp Gly Leu Ile Gly Pro Arg Arg Ile Phe Gly Asp  
 610 615 620  
 Leu Gly Leu Tyr Lys Ser Val Asn Trp Phe Phe Leu Val Gly Ala Ile  
 625 630 635 640  
 Ala Pro Ile Leu Val Trp Leu Ala Ser Arg Met Phe Pro Arg Gln Glu  
 645 650 655  
 Trp Ile Lys Leu Ile Asn Met Pro Val Leu Ile Ser Ala Thr Ser Ser  
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 Met Pro Pro Ala Thr Ala Val Asn Tyr Thr Thr Trp Val Leu Ala Gly  
 675 680 685  
 Phe Leu Ser Gly Phe Val Val Phe Arg Tyr Arg Pro Asn Leu Trp Gln  
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 Arg Tyr Asn Tyr Val Leu Ser Gly Ala Leu Asp Ala Gly Leu Ala Phe  
 705 710 715 720  
 Met Gly Val Leu Leu Tyr Met Cys Leu Gly Leu Glu Asn Val Ser Leu  
 725 730 735

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Asp Trp Trp Gly Asn Glu Leu Asp Gly Cys Pro Leu Ala Ser Cys Pro  
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Thr Ala Pro Gly Ile Ile Val Glu Gly Cys Pro Leu Tyr Thr  
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<211> 432

<212> DNA

<213> Arabidopsis thaliana

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<210> 1366

<211> 143

<212> PRT

<213> Arabidopsis thaliana

<400> 1366

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20 25 30

Leu Thr Ser Gln Leu Ser Gly Leu Arg Ile Ser Tyr Thr Pro Ser Asp  
35 40 45

Val Ile Asn Arg Ile Ser Leu Pro Ser Phe Pro Gly Ile Gln Pro Ile  
Page 2145

50

55

60

Val Ala Arg Arg Ile Cys Pro Phe Thr Gly Lys Lys Ala Asn Arg Ala  
65 70 75 80

Asn Lys Val Ser Phe Ser Asn His Lys Thr Lys Lys Leu Gln Phe Val  
85 90 95

Asn Leu Gln Tyr Lys Arg Val Trp Trp Glu Ala Gly Lys Arg Phe Val  
100 105 110

Lys Leu Arg Leu Ser Thr Lys Ala Leu Lys Thr Ile Glu Lys Asn Gly  
115 120 125

Leu Asp Ala Val Ala Lys Lys Ala Gly Ile Asp Leu Arg Lys Lys  
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&lt;211&gt; 1110

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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<210> 1368

<211> 369

<212> PRT

<213> Arabidopsis thaliana

<400> 1368

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Phe Thr Lys Gly Ala Phe Tyr Tyr	Lys Ser Asn Asn Val Val Thr Gly
35	40 45

Lys Arg Val Phe Ser Ile	Lys Ala Gln Ile Thr Thr Glu Thr Asp Thr
50	55 60

Pro Thr Pro Ala Lys Lys Val Glu Lys Val	Ser Lys Lys Asn Glu Glu
65	70 75 80

Gly Val Ile Val Asn Arg Tyr Arg Pro	Lys Glu Pro Tyr Thr Gly Lys
85	90 95

Cys Leu Leu Asn Thr Lys Ile Thr	Ala Asp Asp Ala Pro Gly Glu Thr
100	105 110

Trp His Met Val Phe Ser His	Gln Gly Glu Ile Pro Tyr Arg Glu Gly
115	120 125

Gln Ser Val Gly Val Ile	Ala Asp Gly Ile Asp Lys Asn Gly Lys Pro
130	135 140

His Lys Val Arg Leu Tyr Ser Ile Ala Ser	Ser Ala Leu Gly Asp Leu
145	150 155 160

Gly Asn Ser Glu Thr Val Ser Leu Cys Val Lys Arg	Leu Val Tyr Thr
Page 2147	

Asn Asp Gln Gly Glu Thr Val Lys Gly Val Cys Ser Asn Phe Leu Cys  
180 185 190

Asp Leu Ala Pro Gly Ser Asp Val Lys Leu Thr Gly Pro Val Gly Lys  
195 200 205

Glu Met Leu Met Pro Lys Asp Pro Asn Ala Thr Val Ile Met Leu Ala  
210 215 220

Thr Gly Thr Gly Ile Ala Pro Phe Arg Ser Phe Leu Trp Lys Met Phe  
225 230 235 240

Phe Glu Lys His Asp Asp Tyr Lys Phe Asn Gly Leu Ala Trp Leu Phe  
245 250 255

Leu Gly Val Pro Thr Thr Ser Ser Leu Leu Tyr Gln Glu Glu Phe Asp  
260 265 270

Lys Met Lys Ala Lys Ala Pro Glu Asn Phe Arg Val Asp Tyr Ala Ile  
275 280 285

Ser Arg Glu Gln Ala Asn Asp Lys Gly Glu Lys Met Tyr Ile Gln Thr  
290 295 300

Arg Met Ala Gln Tyr Ala Ala Glu Leu Trp Glu Leu Leu Lys Lys Asp  
305 310 315 320

Asn Thr Phe Val Tyr Met Cys Gly Leu Lys Gly Met Glu Lys Gly Ile  
325 330 335

Asp Asp Ile Met Val Ser Leu Ala Ala Asn Asp Gly Ile Asp Trp Phe  
340 345 350

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Tyr

<210> 1369

<211> 1173

<212> DNA

<213> Arabidopsis thaliana

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<211> 390

<212> PRT

<213> *Arabidopsis thaliana*

<400> 1370

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20 25 30

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Glu Met Phe Cys Val Arg Ile Ala Asp Leu Ala Pro Ala Ile Met Leu  
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 Asp Pro Gln Glu Gly Asn Gly Val Leu Asp Glu Gly Leu Arg Ser Gly  
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 Arg Val Gln Tyr Ile Ser Ala Asp Leu Arg Asp Lys Ser Gln Val Val  
 65 70 75 80  
 Lys Ala Phe Gln Gly Ala Glu Val Val Phe His Met Ala Ala Pro Asp  
 85 90 95  
 Ser Ser Ile Asn Asn His Gln Leu Gln Tyr Ser Val Asn Val Gln Gly  
 100 105 110  
 Thr Gln Asn Val Ile Asp Ala Cys Val Asp Val Gly Val Lys Arg Leu  
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 Ile Tyr Thr Ser Ser Pro Ser Val Val Phe Asp Gly Val His Gly Ile  
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 Tyr Ser Ala Thr Lys Ala Glu Gly Glu Glu Leu Ile Met Lys Ala Asn  
 165 170 175  
 Gly Arg Asn Gly Leu Leu Thr Cys Cys Ile Arg Pro Ser Ser Ile Phe  
 180 185 190  
 Gly Pro Gly Asp Arg Leu Leu Val Pro Ser Leu Val Ala Ala Ala Arg  
 195 200 205  
 Ala Gly Lys Ser Lys Phe Ile Ile Gly Asp Gly Asn Asn Leu Tyr Asp  
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 Phe Thr Tyr Val Glu Asn Val Ala His Ala His Val Cys Ala Glu Arg  
 225 230 235 240  
 Ala Leu Ala Ser Gly Gly Asp Val Ser Thr Lys Ala Ala Gly Gln Ala  
 245 250 255  
 Tyr Phe Ile Thr Asn Met Glu Pro Ile Lys Phe Trp Glu Phe Met Ser  
 260 265 270  
 Gln Leu Leu Asp Gly Leu Gly Tyr Glu Arg Pro Ser Ile Lys Ile Pro  
 275 280 285

Ala Phe Ile Met Met Pro Ile Ala His Leu Val Glu Leu Thr Tyr Lys  
290 295 300

Val Leu Gly Pro Tyr Gly Met Thr Val Pro Gln Leu Thr Pro Ser Arg  
305 310 315 320

Val Arg Leu Leu Ser Cys Ser Arg Thr Phe Asp Ser Thr Lys Ala Lys  
325 330 335

Asp Arg Leu Gly Tyr Ala Pro Val Val Pro Leu Gln Glu Gly Ile Arg  
340 345 350

Arg Thr Ile Asp Ser Phe Ser His Leu Thr Ala Gly Ser Gln Ser Lys  
355 360 365

Arg Glu Gly Pro Ser Lys Ala Ser Arg Ile Leu Gly Gly Gly Lys Gly  
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Met Thr Ile Tyr Phe Asn  
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<211> 1446

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 1372

&lt;211&gt; 481

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1372

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Met Ser Leu Lys Ala Leu Asp Tyr Glu Ser Leu Asn Glu Asn Val Lys
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Asn Cys Gln Tyr Ala Val Arg Gly Glu Leu Tyr Leu Arg Ala Ser Glu
20      25      30

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```

Leu Gln Lys Glu Gly Lys Lys Ile Ile Phe Thr Asn Val Gly Asn Pro
35      40      45

```

```

His Ala Leu Gly Gln Lys Pro Leu Thr Phe Pro Arg Gln Val Val Ser
50      55      60

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```

Leu Cys Gln Ala Pro Phe Leu Leu Asp Asp Pro Asn Val Gly Met Ile
65      70      75      80

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Phe Pro Ala Asp Ala Ile Ala Arg Ala Lys His Tyr Leu Ser Leu Thr
85      90      95

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Ser Gly Gly Leu Gly Ala Tyr Ser Asp Ser Arg Gly Leu Pro Gly Val  
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Arg Lys Glu Val Ala Glu Phe Ile Glu Arg Arg Asp Gly Tyr Pro Ser  
115 120 125

Asp Pro Glu Leu Ile Phe Leu Thr Asp Gly Ala Ser Lys Gly Val Met  
130 135 140

Gln Ile Leu Asn Cys Val Ile Arg Gly Gln Lys Asp Gly Ile Leu Val  
145 150 155 160

Pro Val Pro Gln Tyr Pro Leu Tyr Ser Ala Thr Ile Ser Leu Leu Gly  
165 170 175

Gly Thr Leu Val Pro Tyr Tyr Leu Glu Glu Ser Glu Asn Trp Gly Leu  
180 185 190

Asp Val Asn Asn Leu Arg Gln Ser Val Ala Gln Ala Arg Ser Gln Gly  
195 200 205

Ile Thr Val Arg Ala Met Val Ile Ile Asn Pro Gly Asn Pro Thr Gly  
210 215 220

Gln Cys Leu Ser Glu Ala Asn Ile Arg Glu Ile Leu Arg Phe Cys Cys  
225 230 235 240

Asp Glu Arg Leu Val Leu Leu Gly Asp Glu Val Tyr Gln Gln Asn Ile  
245 250 255

Tyr Gln Asp Glu Arg Pro Phe Ile Ser Ser Lys Lys Val Leu Met Asp  
260 265 270

Met Gly Ala Pro Ile Ser Lys Glu Val Gln Leu Ile Ser Phe His Thr  
275 280 285

Val Ser Lys Gly Tyr Trp Gly Glu Cys Gly Gln Arg Gly Gly Tyr Phe  
290 295 300

Glu Met Thr Asn Ile Pro Pro Arg Thr Val Glu Glu Ile Tyr Lys Val  
305 310 315 320

Ala Ser Ile Ala Leu Ser Pro Asn Val Ser Ala Gln Ile Phe Met Gly  
325 330 335

Leu Met Val Ser Pro Pro Lys Pro Gly Asp Ile Ser Tyr Asp Gln Phe  
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340

345

350

Val Arg Glu Ser Lys Gly Ile Leu Glu Ser Leu Arg Arg Arg Ala Arg  
355 360

Met Met Thr Asp Gly Phe Asn Ser Cys Lys Asn Val Val Cys Asn Phe  
370 375 380

Thr Glu Gly Ala Met Tyr Ser Phe Pro Gln Ile Lys Leu Pro Ser Lys  
385 390 395 400

Ala Ile Gln Ala Ala Lys Gln Ala Gly Lys Val Pro Asp Val Phe Tyr  
405 410 415

Cys Leu Lys Leu Leu Glu Ala Thr Gly Ile Ser Thr Val Pro Gly Ser  
420 425 430

Gly Phe Gly Gln Lys Glu Gly Val Phe His Leu Arg Thr Thr Ile Leu  
435 440 445

Pro Ala Glu Glu Glu Met Pro Glu Ile Met Asp Ser Phe Lys Lys Phe  
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Asn Asp Glu Phe Met Ser Gln Tyr Ala Asp Asn Phe Gly Tyr Ser Arg  
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&lt;211&gt; 3168

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1373

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&lt;210&gt; 1374

&lt;211&gt; 1055

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1374

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Arg Leu Ser Ser Ser Ser Leu Ile Pro Ile Arg Ser Lys Ser Thr Phe
20           25           30

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```

Thr Gly Phe Arg Ser Arg Thr Gly Val Tyr Leu Ser Lys Thr Thr Ala
35           40           45

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```

Leu Gln Ser Ser Thr Lys  Leu Ser Val Ala Ala Glu Ser Pro Ala Ala
50           55           60

```

```

Thr Ile Ala Thr Asp Asp Trp Gly Lys Val Ser Ala Val Leu Phe Asp
65           70           75           80

```

Met Asp Gly Val Leu Cys Asn Ser Glu Asp Leu Ser Arg Ala Ala  
 85 90 95  
 Val Asp Val Phe Thr Glu Met Gly Val Glu Val Thr Val Asp Asp Phe  
 100 105 110  
 Val Pro Phe Met Gly Thr Gly Glu Ala Lys Phe Leu Gly Gly Val Ala  
 115 120 125  
 Ser Val Lys Glu Val Lys Gly Phe Asp Pro Asp Ala Ala Lys Glu Arg  
 130 135 140  
 Phe Phe Glu Ile Tyr Leu Asp Lys Tyr Ala Lys Pro Glu Ser Gly Ile  
 145 150 155 160  
 Gly Phe Pro Gly Ala Leu Glu Leu Val Thr Glu Cys Lys Asn Lys Gly  
 165 170 175  
 Leu Lys Val Ala Val Ala Ser Ser Ala Asp Arg Ile Lys Val Asp Ala  
 180 185 190  
 Asn Leu Lys Ala Ala Gly Leu Ser Leu Thr Met Phe Asp Ala Ile Val  
 195 200 205  
 Ser Ala Asp Ala Phe Glu Asn Leu Lys Pro Ala Pro Asp Ile Phe Leu  
 210 215 220  
 Ala Ala Ala Lys Ile Leu Gly Val Pro Thr Ser Glu Cys Val Val Ile  
 225 230 235 240  
 Glu Asp Ala Leu Ala Gly Val Gln Ala Ala Gln Ala Ala Asn Met Arg  
 245 250 255  
 Cys Ile Ala Val Lys Thr Thr Leu Ser Glu Ala Ile Leu Lys Asp Ala  
 260 265 270  
 Gly Pro Ser Met Ile Arg Asp Asp Ile Gly Asn Ile Ser Ile Asn Asp  
 275 280 285  
 Ile Leu Thr Gly Gly Ser Asp Ser Thr Arg Asn Ser Thr Ala Met Leu  
 290 295 300  
 Glu Glu Asn Thr Val Ser Asp Lys Thr Ser Ala Asn Gly Phe Gln Gly  
 305 310 315 320  
 Ser Arg Arg Asp Ile Leu Arg Tyr Gly Ser Leu Gly Ile Ala Leu Ser  
 325 330 335

047-E2F-PCT.ST25.txt

Cys Val Tyr Phe Ala Ala Thr Asn Trp Lys Ala Met Gln Tyr Ala Ser  
 340 345 350  
 Pro Lys Ala Leu Trp Asn Ala Leu Val Gly Ala Lys Ser Pro Ser Phe  
 355 360  
 Thr Gln Asn Gln Gly Glu Gly Arg Val Gln Gln Phe Val Asp Tyr Ile  
 370 375 380  
 Ala Asp Leu Glu Ser Lys Gln Thr Ala Thr Thr Val Pro Glu Phe Pro  
 385 390 395 400  
 Ser Lys Leu Asp Trp Leu Asn Thr Ala Pro Leu Gln Phe Arg Arg Asp  
 405 410 415  
 Leu Lys Gly Lys Val Val Ile Leu Asp Phe Trp Thr Tyr Cys Cys Ile  
 420 425 430  
 Asn Cys Met His Val Leu Pro Asp Leu Glu Phe Leu Glu Lys Lys Tyr  
 435 440 445  
 Lys Asp Met Pro Phe Thr Val Val Gly Val His Ser Ala Lys Phe Asp  
 450 455 460  
 Asn Glu Lys Asp Leu Asp Ala Ile Arg Asn Ala Val Leu Arg Tyr Asp  
 465 470 475 480  
 Ile Ser His Pro Val Val Asn Asp Gly Asp Met Tyr Met Trp Arg Glu  
 485 490 495  
 Leu Gly Ile Asn Ser Trp Pro Thr Phe Ala Val Val Ser Pro Asn Gly  
 500 505 510  
 Lys Val Ile Ala Gln Ile Ala Gly Glu Gly His Arg Lys Asp Leu Asp  
 515 520 525  
 Asp Val Val Ala Ala Ala Leu Thr Tyr Tyr Gly Gly Lys Asn Val Leu  
 530 535 540  
 Asp Ser Thr Pro Leu Pro Thr Arg Leu Glu Lys Asp Asn Asp Pro Arg  
 545 550 555 560  
 Leu Ala Thr Ser Pro Leu Lys Phe Pro Gly Lys Leu Ala Ile Asp Thr  
 565 570 575  
 Leu Asn Asn Arg Leu Phe Ile Ser Asp Ser Asn His Asn Arg Ile Ile  
 580 585 590

047-E2F-PCT.ST25.txt

Val Thr Asp Leu Glu Gly Asn Phe Ile Val Gln Ile Gly Ser Ser Gly  
595 600 605

Glu Glu Gly Phe Gln Asp Gly Ser Phe Glu Asp Ala Ala Phe Asn Arg  
610 615 620

Pro Gln Gly Leu Ala Tyr Asn Ala Lys Lys Asn Leu Leu Tyr Val Ala  
625 630 635 640

Asp Thr Glu Asn His Ala Leu Arg Glu Ile Asp Phe Val Asn Glu Arg  
645 650 655

Val Gln Thr Leu Ala Gly Asn Gly Thr Lys Gly Ser Asp Tyr Gln Gly  
660 665 670

Gly Arg Lys Gly Thr Lys Gln Leu Leu Asn Ser Pro Trp Asp Val Cys  
675 680 685

Phe Glu Pro Val Asn Glu Lys Val Tyr Ile Ala Met Ala Gly Gln His  
690 695 700

Gln Ile Trp Glu Tyr Ser Val Leu Asp Gly Ile Thr Arg Val Phe Ser  
705 710 715 720

Gly Asn Gly Tyr Glu Arg Asn Leu Asn Gly Ser Thr Pro Gln Thr Thr  
725 730 735

Ser Phe Ala Gln Pro Ser Gly Ile Ser Leu Gly Pro Asp Leu Lys Glu  
740 745 750

Ala Tyr Ile Ala Asp Ser Glu Ser Ser Ile Arg Ala Leu Asp Leu  
755 760 765

Gln Thr Gly Gly Ser Arg Leu Leu Ala Gly Gly Asp Pro Tyr Phe Ser  
770 775 780

Glu Asn Leu Phe Lys Phe Gly Asp Asn Asp Gly Val Gly Ala Glu Val  
785 790 795 800

Leu Leu Gln His Pro Leu Gly Val Leu Cys Ala Asn Asp Gly Gln Ile  
805 810 815

Tyr Leu Thr Asp Ser Tyr Asn His Lys Ile Lys Lys Leu Asp Pro Val  
820 825 830

Thr Lys Arg Val Val Thr Leu Ala Gly Thr Gly Lys Ala Gly Phe Lys

835  
 840 047-E2F-PCT.ST25.txt 845  
 Asp Gly Lys Val Lys Gly Ala Gln Leu Ser Glu Pro Ala Gly Leu Ala  
 850 855  
 Ile Thr Glu Asn Gly Arg Leu Phe Val Ala Asp Thr Asn Asn Ser Leu  
 865 870 875 880  
 Ile Arg Tyr Ile Asp Leu Asn Lys Gly Glu Asp Ser Glu Ile Leu Thr  
 885 890 895  
 Leu Glu Leu Lys Gly Val Gln Pro Pro Thr Pro Lys Ala Lys Ser Leu  
 900 905 910  
 Lys Arg Leu Arg Lys Arg Ala Ser Ala Asp Thr Lys Ile Val Lys Val  
 915 920 925  
 Asp Ser Val Thr Ser Arg Glu Gly Asp Leu Asn Leu Lys Ile Ser Leu  
 930 935 940  
 Pro Asp Gly Tyr His Phe Ser Lys Glu Ala Arg Ser Lys Phe Val Val  
 945 950 955 960  
 Asp Val Glu Pro Glu Asn Ala Val Ala Ile Asp Pro Thr Glu Gly Thr  
 965 970 975  
 Leu Ser Pro Glu Gly Ser Thr Met Leu His Phe Ile Gln Ser Ser Thr  
 980 985 990  
 Ser Ala Ser Val Gly Lys Ile Ser Cys Lys Val Tyr Tyr Cys Lys Glu  
 995 1000 1005  
 Asp Glu Val Cys Leu Tyr Gln Ser Val Gln Phe Glu Val Pro Phe  
 1010 1015 1020  
 Lys Val Glu Ser Glu Leu Ser Ala Ser Pro Thr Ile Thr Phe Thr  
 1025 1030 1035  
 Val Thr Pro Arg Ala Pro Asp Ala Gly Gly Leu Gln Leu Gln Gly  
 1040 1045 1050  
 Thr Arg  
 1055

<210> 1375

<211> 795

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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<400> 1375
atggattgtg ttgaatctta tttatccgga gataattctg atgaatctcc ggtgatgcat    60
acttggtttt ctccgtctcc gtctccgtct gactcttctt ctctctcttc atcttctgct    120
tcttcttcca ttggggaggaa tagcgacgac ggtgagaaat cgtcggagga cgggtggagat    180
gacgccggag agaatgaagt tgagtctccg tataaaggtc ctcttgaaat gatggaatct    240
ctcgaacaag tcttacctgt taggaaaggg atatcgaagt attacagtgg aaagtcaaaag    300
tcttttacta atttaacggc ggaggcagct tcggcggtga ctcttcttct gtcgatgaaa    360
gatttagcga agccggagaa tccttacagt aggaggagga ggaatctcct ctgccatcag    420
atttgggaaa ataacaagac gactccacgt ggtgggatct cgaagaaaca cgttatgagt    480
tctagcagaa gcgctttgac gctagctatg gctgttgcgg ctggtgtgat gaccggagaa    540
ggatcttctt ccggagggtga ctgctgcgcg ggatcaagtc cgacgacttc tggatctcct    600
ccgaggcagc tacatcatca tcaacatcag atgaagaagc ttctccggtt gtatcctagg    660
agtcaagggt cttttggtaa ttgacttcg tctcagtcgt cgttgggttt ttgtgcctgg    720
agatcgtttt cggtggctga ttttccgagg tgttttccgg cgacggcgag tgggattggg    780
tttaatgact cgtag                                     795

```

&lt;210&gt; 1376

&lt;211&gt; 264

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

```

<400> 1376
Met Asp Cys Val 5 Glu Ser Tyr Leu Ser 10 Gly Asp Asn Ser Asp 15 Glu Ser
Pro Val Met His 20 Thr Trp Phe Ser 25 Pro Ser Pro Ser Pro 30 Asp Ser
Ser Ser Ser 35 Pro Ser Ser Ser Ala 40 Ser Ser Ser Ile 45 Gly Arg Asn Ser
Asp Asp 50 Gly Glu Lys Ser 55 Glu Asp Gly Gly Asp 60 Asp Ala Gly Glu

```

047-E2F-PCT.ST25.txt

Asn Glu Val Glu Ser Pro Tyr Lys Gly Pro Leu Glu Met Met Glu Ser  
65 70 75 80

Leu Glu Gln Val Leu Pro Val Arg Lys Gly Ile Ser Lys Tyr Tyr Ser  
85 90 95

Gly Lys Ser Lys Ser Phe Thr Asn Leu Thr Ala Glu Ala Ala Ser Ala  
100 105 110

Leu Thr Ser Ser Ser Ser Met Lys Asp Leu Ala Lys Pro Glu Asn Pro  
115 120 125

Tyr Ser Arg Arg Arg Arg Asn Leu Leu Cys His Gln Ile Trp Glu Asn  
130 135 140

Asn Lys Thr Thr Pro Arg Gly Gly Ile Ser Lys Lys His Val Met Ser  
145 150 155 160

Ser Ser Arg Ser Ala Leu Thr Leu Ala Met Ala Val Ala Ala Gly Val  
165 170 175

Met Thr Gly Glu Gly Ser Ser Ser Gly Gly Asp Ser Ser Pro Gly Ser  
180 185 190

Ser Pro Thr Thr Ser Gly Ser Pro Pro Arg Gln Leu His His His Gln  
195 200 205

His Gln Met Lys Lys Leu Pro Pro Leu Tyr Pro Arg Ser Gln Gly Ser  
210 215 220

Phe Gly Asn Leu Thr Ser Ser Gln Ser Ser Leu Gly Phe Cys Ala Trp  
225 230 235 240

Arg Ser Phe Ser Val Ala Asp Phe Pro Arg Cys Phe Pro Ala Thr Ala  
245 250 255

Ser Gly Ile Gly Phe Asn Asp Ser  
260

<210> 1377

<211> 327

<212> DNA

<213> Arabidopsis thaliana



## 047-E2F-PCT.ST25.txt

<400> 1377  
 atggaagaag aaatattatc tttgtctct atccaaagcc acgtgtcttc tgctggagag 60  
 aaaccaatac acgtactgga tgagaatcca aagttttccc gacttcaccc ttcgccgtca 120  
 aacatcgact ccggtgaaga ttcaacgtcg attaacaat caacatgga atcttatggg 180  
 ttttcaccgg taaaaataat cgaagcccta attagagaaa caacagctca aggtaatggt 240  
 aatatgcaac ggaaatcact tttttttcca actcaaatct ctgatttggt tcctgcaatt 300  
 ctaaactcaa aaagaaaaac aggttag 327

<210> 1378

<211> 108

<212> PRT

<213> Arabidopsis thaliana

<400> 1378

Met Glu Glu Glu Ile Leu Ser Phe Val Ser Ile Gln Ser His Val Ser  
 1 5 10 15

Ser Ala Gly Glu Lys Pro Ile His Val Leu Asp Glu Asn Pro Lys Phe  
 20 25 30

Ser Arg Leu His Pro Ser Pro Ser Asn Ile Asp Ser Gly Glu Asp Ser  
 35 40 45

Thr Ser Ile Asn Lys Ser Asn Met Glu Ser Tyr Gly Phe Ser Pro Val  
 50 55 60

Lys Ile Ile Glu Ala Leu Ile Arg Glu Thr Thr Ala Gln Gly Asn Val  
 65 70 75 80

Asn Met Gln Arg Lys Ser Leu Phe Phe Pro Thr Gln Ile Ser Asp Leu  
 85 90 95

Phe Pro Ala Ile Leu Asn Ser Lys Arg Lys Thr Gly  
 100 105

<210> 1379

<211> 420

<212> DNA

<213> Arabidopsis thaliana

047-E2F-PCT.ST25.txt

<400> 1379  
 atggctaag ctgcgtcagg aatggcagtc catgatgact gcaagctaag atttctggaa 60  
 ctgaaggcga aaaggacaca ccgtttcatt gtctacaaga ttgaggagaa gcagaagcaa 120  
 gtgattgttg agaaagttag tgaacctatt ctaacttacg aggactttgc agcaagtctt 180  
 ccagctgacg aatgccgata cgccatttat gatttcgact ttgtcactgc agagaattgc 240  
 cagaagagca agattttctt cattgcatgg tgtcccgcag tagcaaaagt gagaagcaag 300  
 atgatctatg cgagctctaa ggacagggtc aagcgtgaac ttgatggaat tcaagtggag 360  
 cttcaagcaa ctgatccaac tgagatggat cttgatgttt tgaaaagccg cgtaactaa 420

<210> 1380

<211> 139

<212> PRT

<213> Arabidopsis thaliana

<400> 1380

Met Ala Asn Ala Ala Ser Gly Met Ala Val His Asp Asp Cys Lys Leu  
 1 5 10  
 Arg Phe Leu Glu Leu Lys Ala Lys Arg Thr His Arg Phe Ile Val Tyr  
 20 25 30  
 Lys Ile Glu Glu Lys Gln Lys Gln Val Ile Val Glu Lys Val Gly Glu  
 35 40 45  
 Pro Ile Leu Thr Tyr Glu Asp Phe Ala Ala Ser Leu Pro Ala Asp Glu  
 50 55 60  
 Cys Arg Tyr Ala Ile Tyr Asp Phe Asp Phe Val Thr Ala Glu Asn Cys  
 65 70 75 80  
 Gln Lys Ser Lys Ile Phe Phe Ile Ala Trp Cys Pro Asp Val Ala Lys  
 85 90 95  
 Val Arg Ser Lys Met Ile Tyr Ala Ser Ser Lys Asp Arg Phe Lys Arg  
 100 105 110  
 Glu Leu Asp Gly Ile Gln Val Glu Leu Gln Ala Thr Asp Pro Thr Glu  
 115 120 125  
 Met Asp Leu Asp Val Leu Lys Ser Arg Val Asn  
 130 135

&lt;210&gt; 1381

&lt;211&gt; 276

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1381

```

atggggataa actctaagca tgttgtggtt gttattatgg tgatgatggt cattataagc   60
tcattgtttgg ctgcaaggaa tataattccc cgggaaacta atcaagaaag cgaaaaagt   120
tcccagagaga tgatcatagg gaaagaagaa gactctactg agaaaataga gcaccaaga   180
agcagcgtgg agaatacaca ttatatccca agacaagatt tctacaacta tggacctgga   240
ggcgaaaata atggaggagg tgggtgtggt ggataa                               276

```

&lt;210&gt; 1382

&lt;211&gt; 91

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1382

```

Met Gly Ile Asn Ser Lys His Val Val Val Val Ile Met Val Met Met
 1          5          10
Val Ile Ile Ser Ser Cys Leu Ala Ala Arg Asn Ile Ile Pro Arg Glu
      20          25          30
Thr Asn Gln Glu Ser Glu Lys Val Ser Arg Glu Met Ile Ile Gly Lys
      35          40          45
Glu Glu Asp Ser Thr Glu Lys Ile Glu His Pro Arg Ser Ser Val Glu
      50          55          60
Asn His His Tyr Ile Pro Arg Gln Asp Phe Tyr Asn Tyr Gly Pro Gly
65          70          75          80
Gly Glu Asn Asn Gly Gly Gly Gly Gly Gly Gly
      85          90

```

&lt;210&gt; 1383

&lt;211&gt; 1863

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

<400> 1383  
 atggagcaca acaagggttg tacagaacct caagattcat atgatgatca acaaaaatgg 60  
 gttctcgatt cttcgaccga tagtagagga gagattccgc ttccgggtca aaccggagct 120  
 tggagagctg cactcttcat cattggtatc gaattcagcg agaggctaag ttactttggg 180  
 atctccacga acttagtggt ctacttgact accattcttc accaagatct caagatggct 240  
 gtaaaaaata cgaactactg gtctggtgtc actactttga tgcctcttct tggaggcttc 300  
 gtcgcagatg cttatctcgg ccgttatgga actgtcctac ttgcaaccac catttacctt 360  
 atgggcttga tctgttaac attgtcttgg ttataccgg gattgaaagc atgtcatgaa 420  
 gacatgtgtg ttgagccaag gaaagccac gagatagcct tcttcattgc aatctacttg 480  
 atctccatag gcactggagg tcataagcca tcccttgaga gctttggagc tgaccaattc 540  
 gaagatggcc atccggaaga acgaaaaatg aaatgtctt actttaactg gtggaatgct 600  
 ggtctatgcg ctgggtatctt aaccgcggtg actgtaattg tctatatcga agaccggatt 660  
 ggttggggtg tggctagcat catactcaca atagttatgg ctacttcgtt ttttatcttc 720  
 cgtatcggca aaccgtttta ccgttataga gcaccttctg gtagccattg gacccaatg 780  
 ttgcaagtct ttgtgccgc cattgcctaa agaaatcttc ctgtcccg tgattcttct 840  
 cttcttcacg agttaactaa tgaagagtat actaaaggcc ggctctcttc cagctcaaa 900  
 aatcttaaat ttctagacaa agcagcagtt attgaggacc gaaacgagaa cactaaagcc 960  
 gagaagcaga gtccatggcg actcgcaacg gttacgaaag tggaagaagt taagctactc 1020  
 atcaacatga ttccaatctg gttctttaca ttagcctttg gagtatgctg cactcaaagc 1080  
 tcaacactct ttatcaaaaa agccataata atggaccgac acatcacagg gacaagcttc 1140  
 atagttcctc cagcttcatt gttctctctc atagctctct ccataatcat caccgtaaca 1200  
 atctacgaga aactctctgt tcctcttttg agacgtgcca caggaacga aagaggcatt 1260  
 agcattctac aaagaatcgg ggtcgggatg gttttctctt tattcgctat gatcattgct 1320  
 gctctgattg agaagaaaag attagattat gctaaggaac accacatgaa taagaccatg 1380  
 accttgagtg ctatatgggt agctcctcaa ttcttagtct taggagttgc ggatgctttt 1440  
 acccttgctg gtcttcaaga atattttctac gaccaagtcc cagattctat gagaagctta 1500  
 ggcatagcgt ttacctcag cgtgcttgga gcggctagct ttgtcaaca tcttttgata 1560  
 acggttagtg atcatttagc cgaggaaatt tccgggaagg gctggttttg gaaagacctt 1620  
 aatagcagcc gcttggaccg cttttactgg atgctagccg ccttgaccgc tgcaaatata 1680

## 047-E2F-PCT.ST25.txt

tgctgctttg tgatcgtggc catgagatac acttacaaga ctgtgcagcc gagtctggct 1740  
 gttgttgctg acggcgggtga tgacgttgag acagccacgg ggacgaataa caggtccaag 1800  
 ttacggctg gttcgggaaa gacctaata gcagctgcat ggaccgcttt tactggatgc 1860  
 tag 1863

<210> 1384

<211> 620

<212> PRT

<213> Arabidopsis thaliana

<400> 1384

Met Glu His Asn Lys Val Asp Thr Glu Pro Gln Asp Ser Tyr Asp Asp  
 1 5 10 15

Gln Gln Lys Trp Val Leu Asp Ser Ser Thr Asp Ser Arg Gly Glu Ile  
 20 25 30

Pro Leu Arg Ala Gln Thr Gly Ala Trp Arg Ala Ala Leu Phe Ile Ile  
 35 40 45

Gly Ile Glu Phe Ser Glu Arg Leu Ser Tyr Phe Gly Ile Ser Thr Asn  
 50 55 60

Leu Val Val Tyr Leu Thr Thr Ile Leu His Gln Asp Leu Lys Met Ala  
 65 70 75 80

Val Lys Asn Thr Asn Tyr Trp Ser Gly Val Thr Thr Leu Met Pro Leu  
 85 90 95

Leu Gly Gly Phe Val Ala Asp Ala Tyr Leu Gly Arg Tyr Gly Thr Val  
 100 105 110

Leu Leu Ala Thr Thr Ile Tyr Leu Met Gly Leu Ile Leu Leu Thr Leu  
 115 120 125

Ser Trp Phe Ile Pro Gly Leu Lys Ala Cys His Glu Asp Met Cys Val  
 130 135 140

Glu Pro Arg Lys Ala His Glu Ile Ala Phe Phe Ile Ala Ile Tyr Leu  
 145 150 155 160

Ile Ser Ile Gly Thr Gly Gly His Lys Pro Ser Leu Glu Ser Phe Gly  
 Page 2167

Ala Asp Gln Phe Glu Asp Gly His Pro Glu Glu Arg Lys Met Lys Met  
180 185

Ser Tyr Phe Asn Trp Trp Asn Ala Gly Leu Cys Ala Gly Ile Leu Thr  
195 200 205

Ala Val Thr Val Ile Val Tyr Ile Glu Asp Arg Ile Gly Trp Gly Val  
210 215 220

Ala Ser Ile Ile Leu Thr Ile Val Met Ala Thr Ser Phe Phe Ile Phe  
225 230 235 240

Arg Ile Gly Lys Pro Phe Tyr Arg Tyr Arg Ala Pro Ser Gly Ser Pro  
245 250 255

Leu Thr Pro Met Leu Gln Val Phe Val Ala Ala Ile Ala Lys Arg Asn  
260 265 270

Leu Pro Cys Pro Ser Asp Ser Ser Leu Leu His Glu Leu Thr Asn Glu  
275 280 285

Glu Tyr Thr Lys Gly Arg Leu Leu Ser Ser Ser Lys Asn Leu Lys Phe  
290 295 300

Leu Asp Lys Ala Ala Val Ile Glu Asp Arg Asn Glu Asn Thr Lys Ala  
305 310 315 320

Glu Lys Gln Ser Pro Trp Arg Leu Ala Thr Val Thr Lys Val Glu Glu  
325 330 335

Val Lys Leu Leu Ile Asn Met Ile Pro Ile Trp Phe Phe Thr Leu Ala  
340 345 350

Phe Gly Val Cys Ala Thr Gln Ser Ser Thr Leu Phe Ile Lys Gln Ala  
355 360 365

Ile Ile Met Asp Arg His Ile Thr Gly Thr Ser Phe Ile Val Pro Pro  
370 375 380

Ala Ser Leu Phe Ser Leu Ile Ala Leu Ser Ile Ile Ile Thr Val Thr  
385 390 395 400

Ile Tyr Glu Lys Leu Leu Val Pro Leu Leu Arg Arg Ala Thr Gly Asn  
405 410 415

Glu Arg Gly Ile Ser Ile Leu Gln Arg Ile Gly Val Gly Met Val Phe  
 420 425 430

Ser Leu Phe Ala Met Ile Ile Ala Ala Leu Ile Glu Lys Lys Arg Leu  
 435 440 445

Asp Tyr Ala Lys Glu His His Met Asn Lys Thr Met Thr Leu Ser Ala  
 450 455 460

Ile Trp Leu Ala Pro Gln Phe Leu Val Leu Gly Val Ala Asp Ala Phe  
 465 470 475 480

Thr Leu Val Gly Leu Gln Glu Tyr Phe Tyr Asp Gln Val Pro Asp Ser  
 485 490 495

Met Arg Ser Leu Gly Ile Ala Phe Tyr Leu Ser Val Leu Gly Ala Ala  
 500 505 510

Ser Phe Val Asn Asn Leu Leu Ile Thr Val Ser Asp His Leu Ala Glu  
 515 520 525

Glu Ile Ser Gly Lys Gly Trp Phe Gly Lys Asp Leu Asn Ser Ser Arg  
 530 535 540

Leu Asp Arg Phe Tyr Trp Met Leu Ala Ala Leu Thr Ala Ala Asn Ile  
 545 550 555 560

Cys Cys Phe Val Ile Val Ala Met Arg Tyr Thr Tyr Lys Thr Val Gln  
 565 570 575

Pro Ser Leu Ala Val Val Ala Asp Gly Gly Asp Asp Val Glu Thr Ala  
 580 585 590

Thr Gly Thr Asn Asn Thr Ser Lys Phe Thr Ala Gly Ser Gly Lys Thr  
 595 600 605

Leu Ile Ala Ala Ala Trp Thr Ala Phe Thr Gly Cys  
 610 615 620

<210> 1385

<211> 963

<212> DNA

<213> Arabidopsis thaliana

<400> 1385

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atggcctgcc aaaacaatct cgttggaag caaatcatcg actgtacga ccaaatctca    60
aagctcaaga gcttaaaacc ttccaaaaat gtcgacactt tgttcggaca actcgtgtcc    120
acgtgcttac ccacggatac aaacatcgat gtcacaaata tgtgtgaaga agtcaaagac    180
atgagagcta atctcatcaa gctttgtggt gaagccgaag gttatttaga gcaacacttc    240
tccacaattt tgggatcttt acaagaagac caaaaccac ttgaccattt acacatcttt    300
ccttactact ccaactacct caagctaggc aagctcgagt tcgatctcct gagccaacac    360
tcaagccatg tccccaccaa gattgccttc gtgggttcgg gtccgatgcc tctcacatcc    420
atcgatttgg ccaagtttca cctcccaac acgacgttcc acaactttga catcgactca    480
cacgcaaaca cactcgcttc aaacctcgtc tctcgcgacc cggacctctc aaaacgcatg    540
atcttcaca caacggacgt actaaacgca accgaaggcc ttgaccaata tgacgtcggt    600
ttcttagcgg cgcttgtagg gatggacaaa gagtcaaagg tcaaagccat cgagcacttg    660
gagaaacaca tggtcctcgg agctgttctt atgctaagga gtgctcatgc tctcagagct    720
ttcttatatc caatcgttga ctgctctgat ctcaaaggct ttcaactctt gaccatctat    780
catccaaccg atgacgtggt taactcggtt gtgatcgac gtaagctcgg tggccgacc    840
acgccggggg ttaatggtag tcgtggatgc atgtttatgc cttgtaactg ctccaagatt    900
cacgcatga tgaacaaccg tggtgaagaag aatatgatcg aggagtttag tgccatcgag    960
taa

```

&lt;210&gt; 1386

&lt;211&gt; 320

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1386

```

Met Ala Cys Gln Asn Asn Leu Val Val Lys Gln Ile Ile Asp Leu Tyr
1           5           10          15

```

```

Asp Gln Ile Ser Lys Leu Lys Ser Leu Lys Pro Ser Lys Asn Val Asp
20          25          30

```

```

Thr Leu Phe Gly Gln Leu Val Ser Thr Cys Leu Pro Thr Asp Thr Asn
35          40          45

```

```

Ile Asp Val Thr Asn Met Cys Glu Glu Val Lys Asp Met Arg Ala Asn
50          55          60

```



047-E2F-PCT.ST25.txt

Leu Ile Lys Leu Cys Gly Glu Ala Glu Gly Tyr Leu Glu Gln His Phe  
 65 70 75 80  
 Ser Thr Ile Leu Gly Ser Leu Gln Glu Asp Gln Asn Pro Leu Asp His  
 85 90 95  
 Leu His Ile Phe Pro Tyr Tyr Ser Asn Tyr Leu Lys Leu Gly Lys Leu  
 100 105 110  
 Glu Phe Asp Leu Leu Ser Gln His Ser Ser His Val Pro Thr Lys Ile  
 115 120 125  
 Ala Phe Val Gly Ser Gly Pro Met Pro Leu Thr Ser Ile Val Leu Ala  
 130 135 140  
 Lys Phe His Leu Pro Asn Thr Thr Phe His Asn Phe Asp Ile Asp Ser  
 145 150 155 160  
 His Ala Asn Thr Leu Ala Ser Asn Leu Val Ser Arg Asp Pro Asp Leu  
 165 170 175  
 Ser Lys Arg Met Ile Phe His Thr Thr Asp Val Leu Asn Ala Thr Glu  
 180 185 190  
 Gly Leu Asp Gln Tyr Asp Val Val Phe Leu Ala Ala Leu Val Gly Met  
 195 200 205  
 Asp Lys Glu Ser Lys Val Lys Ala Ile Glu His Leu Glu Lys His Met  
 210 215 220  
 Ala Pro Gly Ala Val Leu Met Leu Arg Ser Ala His Ala Leu Arg Ala  
 225 230 235 240  
 Phe Leu Tyr Pro Ile Val Asp Ser Ser Asp Leu Lys Gly Phe Gln Leu  
 245 250 255  
 Leu Thr Ile Tyr His Pro Thr Asp Asp Val Val Asn Ser Val Val Ile  
 260 265 270  
 Ala Arg Lys Leu Gly Gly Pro Thr Thr Pro Gly Val Asn Gly Thr Arg  
 275 280 285  
 Gly Cys Met Phe Met Pro Cys Asn Cys Ser Lys Ile His Ala Ile Met  
 290 295 300  
 Asn Asn Arg Gly Lys Lys Asn Met Ile Glu Glu Phe Ser Ala Ile Glu  
 305 310 315 320

&lt;210&gt; 1387

&lt;211&gt; 1509

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1387

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gctgagctag ctaaaagagct tctcaagacg caagatgtca actttgcgga ccggcctcca	300
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ttcatcaaga tcttttatgg gactcaaagc gttttgggga agatcttttt ctctgatttt	660
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&lt;210&gt; 1388

&lt;211&gt; 502

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1388

Met Glu Asp Ile Ile Ile Gly Val Val Ala Leu Ala Ala Val Leu Leu  
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Phe Phe Leu Tyr Gln Lys Pro Lys Thr Lys Arg Tyr Lys Leu Pro Pro  
 20 25 30

Gly Pro Ser Pro Leu Pro Val Ile Gly Asn Leu Leu Gln Leu Gln Lys  
 35 40 45

Leu Asn Pro Gln Arg Phe Phe Ala Gly Trp Ala Lys Lys Tyr Gly Pro  
 50 55 60

Ile Leu Ser Tyr Arg Ile Gly Ser Arg Thr Met Val Val Ile Ser Ser  
 65 70 75 80

Ala Glu Leu Ala Lys Glu Leu Leu Lys Thr Gln Asp Val Asn Phe Ala  
 85 90 95

Asp Arg Pro Pro His Arg Gly His Glu Phe Ile Ser Tyr Gly Arg Arg  
 100 105 110

Asp Met Ala Leu Asn His Tyr Thr Pro Tyr Tyr Arg Glu Ile Arg Lys  
 115 120 125

Met Gly Met Asn His Leu Phe Ser Pro Thr Arg Val Ala Thr Phe Lys  
 130 135 140

His Val Arg Glu Glu Glu Ala Arg Arg Met Met Asp Lys Ile Asn Lys  
 145 150 155 160

Ala Ala Asp Lys Ser Glu Val Val Asp Ile Ser Glu Leu Met Leu Thr  
 165 170 175

Phe Thr Asn Ser Val Val Cys Arg Gln Ala Phe Gly Lys Lys Tyr Asn  
 180 185 190

Glu Asp Gly Glu Glu Met Lys Arg Phe Ile Lys Ile Leu Tyr Gly Thr  
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195  
 200 047-E2F-PCT.ST25.txt  
 205

Gln Ser Val Leu Gly Lys Ile Phe Phe Ser Asp Phe Phe Pro Tyr Cys  
 210 215

Gly Phe Leu Asp Asp Leu Ser Gly Leu Thr Ala Tyr Met Lys Glu Cys  
 225 230 235 240

Phe Glu Arg Gln Asp Thr Tyr Ile Gln Glu Val Val Asn Glu Thr Leu  
 245 250 255

Asp Pro Lys Arg Val Lys Pro Glu Thr Glu Ser Met Ile Asp Leu Leu  
 260 265 270

Met Gly Ile Tyr Lys Glu Gln Pro Phe Ala Ser Glu Phe Thr Val Asp  
 275 280 285

Asn Val Lys Ala Val Ile Leu Asp Ile Val Val Ala Gly Thr Asp Thr  
 290 295 300

Ala Ala Ala Ala Val Val Trp Gly Met Thr Tyr Leu Met Lys Tyr Pro  
 305 310 315 320

Gln Val Leu Lys Lys Ala Gln Ala Glu Val Arg Glu Tyr Met Lys Glu  
 325 330 335

Lys Gly Ser Thr Phe Val Thr Glu Asp Asp Val Lys Asn Leu Pro Tyr  
 340 345 350

Phe Arg Ala Leu Val Lys Glu Thr Leu Arg Ile Glu Pro Val Ile Pro  
 355 360 365

Leu Leu Ile Pro Arg Ala Cys Ile Gln Asp Thr Lys Ile Ala Gly Tyr  
 370 375 380

Asp Ile Pro Ala Gly Thr Thr Val Asn Val Asn Ala Trp Ala Val Ser  
 385 390 395 400

Arg Asp Glu Lys Glu Trp Gly Pro Asn Pro Asp Glu Phe Arg Pro Glu  
 405 410 415

Arg Phe Leu Glu Lys Glu Val Asp Phe Lys Gly Thr Asp Tyr Glu Phe  
 420 425 430

Ile Pro Phe Gly Ser Gly Arg Arg Met Cys Pro Gly Met Arg Leu Gly  
 435 440 445

Ala Ala Met Leu Glu Val Pro Tyr Ala Asn Leu Leu Ser Phe Asn  
 450 455 460

Phe Lys Leu Pro Asn Gly Met Lys Pro Asp Asp Ile Asn Met Asp Val  
 465 470 475 480

Met Thr Gly Leu Ala Met His Lys Ser Gln His Leu Lys Leu Val Pro  
 485 490 495

Glu Lys Val Asn Lys Tyr  
 500

<210> 1389

<211> 1122

<212> DNA

<213> Arabidopsis thaliana

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 aagcttagaa gagtttcttc ttcttctggt tcactctctat cctcttcttg gacgtattta 180  
 aaacgagttt tcttatccac gacaagata tccaaatccc gtaaccaaac acatcctaac 240  
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1122

&lt;210&gt; 1390

&lt;211&gt; 373

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1390

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1 5 10 15Leu Cys Phe Leu Phe Leu Gly Cys Phe Phe Phe Pro Lys Asp Ala Asp  
20 25 30Tyr Lys Gln Lys Arg Arg Lys Lys Lys Leu Arg Arg Val Ser Ser Ser  
35 40 45Ser Gly Ser Ser Leu Ser Ser Ser Trp Thr Tyr Leu Lys Arg Val Phe  
50 55 60Leu Ser Thr Thr Arg Ile Ser Lys Ser Arg Asn Gln Thr His Pro Asn  
65 70 75 80Val Thr Leu Thr Ser Ala Arg Ser Ser Gln Asn Ser Leu Val Thr Leu  
85 90 95Val Gln Pro Asp Thr Thr Asn Gln Pro Asp Pro Glu Thr Arg Ile His  
100 105 110Gln Gln Thr Glu Phe Glu Ile Ser Ser Ser Asp Glu Ile Phe Pro Cys  
115 120 125Asn Ser Cys Gly Glu Ile Phe Pro Lys Ile Asn Leu Leu Glu Asn His  
130 135 140Ile Ala Ile Lys His Ala Val Ser Glu Leu Ile Ala Gly Glu Ser Ser  
145 150 155 160Thr Asn Ile Val Lys Ile Ile Phe Lys Ser Gly Trp Pro Glu Gln Gly  
165 170 175Asn Tyr Lys Ser Pro Val Ile Asn Arg Ile Leu Lys Ile His Asn Ser  
180 185 190

Ser Lys Ile Leu Thr Arg Phe Glu Glu Tyr Arg Glu Phe Val Lys Ala  
 195 200 205

Lys Ala Ala Arg Ser Asn Gly Gly Gly Arg Arg Trp Asp Asp Glu Arg  
 210 215 220

Cys Val Ala Asp Gly Asn Glu Leu Leu Arg Phe Tyr Cys Ser Thr Phe  
 225 230 235 240

Met Cys Asp Leu Gly Gln Asn Gly Lys Ser Asn Leu Cys Gly His Gln  
 245 250 255

Tyr Cys Ser Ile Cys Gly Ile Ile Gly Ser Gly Phe Ser Pro Lys Leu  
 260 265 270

Asp Gly Ile Ala Thr Leu Ala Thr Gly Trp Arg Gly His Val Ala Val  
 275 280 285

Pro Glu Glu Val Glu Glu Glu Phe Gly Phe Met Asn Val Lys Arg Ala  
 290 295 300

Met Leu Val Cys Arg Val Val Ala Gly Arg Val Gly Cys Asp Leu Ile  
 305 310 315 320

Asp Asp Asp Asp Val Asp Lys Ser Asp Gly Gly Gly Tyr Asp Ser Leu  
 325 330 335

Val Gly Gln Ser Gly Asn Lys Ser Gly Ala Leu Leu Arg Ile Asp Asp  
 340 345 350

Asp Glu Leu Leu Val Phe Asn Pro Arg Ala Val Leu Pro Cys Phe Val  
 355 360 365

Ile Val Tyr Thr Val  
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<210> 1391

<211> 1953

<212> DNA

<213> Arabidopsis thaliana

<400> 1391  
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caagtcgcca	tgaaccttac	caacaccgtc	ttcgaatgcta	agcgtctaata	cggagaaga	240
tacagtgtac	cctctgttca	agcggataag	agtcactggc	cttttaagggt	tgtttccggt	300
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gacgagaaga	tcgcatctaa	gcttgacgca	gctgacaaga	agaagattga	ggatgcaatc	1740
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&lt;210&gt; 1392

&lt;211&gt; 650

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1392

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20 25 30Ala Asn Asp Gln Gly Asn Arg Thr Thr Pro Ser Tyr Val Ala Phe Thr  
35 40 45Asp Ser Glu Arg Leu Ile Gly Asp Ala Ala Lys Asn Gln Val Ala Met  
50 55 60Asn Pro Thr Asn Thr Val Phe Asp Ala Lys Arg Leu Ile Gly Arg Arg  
65 70 75 80Tyr Ser Asp Pro Ser Val Gln Ala Asp Lys Ser His Trp Pro Phe Lys  
85 90 95Val Val Ser Gly Pro Gly Glu Lys Pro Met Ile Val Val Asn His Lys  
100 105 110Gly Glu Glu Lys Gln Phe Ser Ala Glu Glu Ile Ser Ser Met Val Leu  
115 120 125Ile Lys Met Arg Glu Ile Ala Glu Ala Phe Leu Gly Ser Pro Val Lys  
130 135 140Asn Ala Val Val Thr Val Pro Ala Tyr Phe Asn Asp Ser Gln Arg Gln  
145 150 155 160Ala Thr Lys Asp Ala Gly Val Ile Ser Gly Leu Asn Val Met Arg Ile  
165 170 175Ile Asn Glu Pro Thr Ala Ala Ala Ile Ala Tyr Gly Leu Asp Lys Lys  
180 185 190Ala Ser Ser Val Gly Glu Lys Asn Val Leu Ile Phe Asp Leu Gly Gly  
195 200 205

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Gly Thr Phe Asp Val Ser Leu Leu Thr Ile Glu Gly Ile Phe Glu  
 210 215 220  
 Val Lys Ala Thr Ala Gly Asp Thr His Leu Gly Gly Glu Asp Phe Asp  
 225 230 235 240  
 Asn Arg Met Val Asn His Phe Val Gln Glu Phe Lys Arg Lys Asn Lys  
 245 250 255  
 Lys Asp Ile Thr Gly Asn Pro Arg Ala Leu Arg Arg Leu Arg Thr Ala  
 260 265 270  
 Cys Glu Arg Ala Lys Arg Thr Leu Ser Ser Thr Ala Gln Thr Thr Ile  
 275 280 285  
 Glu Ile Asp Ser Leu Phe Glu Gly Ile Asp Phe Tyr Thr Thr Ile Thr  
 290 295 300  
 Arg Ala Arg Phe Glu Glu Leu Asn Met Asp Leu Phe Arg Lys Cys Met  
 305 310 315 320  
 Glu Pro Val Glu Lys Cys Leu Arg Asp Ala Lys Met Asp Lys Ser Ser  
 325 330 335  
 Val His Asp Val Val Leu Val Gly Gly Ser Thr Arg Ile Pro Lys Val  
 340 345 350  
 Gln Gln Leu Leu Gln Asp Phe Phe Asn Gly Lys Glu Leu Cys Lys Ser  
 355 360 365  
 Ile Asn Pro Asp Glu Ala Val Ala Tyr Gly Ala Ala Val Gln Ala Ala  
 370 375 380  
 Ile Leu Ser Gly Glu Gly Asn Glu Lys Val Gln Asp Leu Leu Leu Leu  
 385 390 395 400  
 Asp Val Thr Pro Leu Ser Leu Gly Leu Glu Thr Ala Gly Gly Val Met  
 405 410 415  
 Thr Val Leu Ile Pro Arg Asn Thr Thr Ile Pro Thr Lys Lys Glu Gln  
 420 425 430  
 Ile Phe Ser Thr Tyr Ser Asp Asn Gln Pro Gly Val Leu Ile Gln Val  
 435 440 445  
 Tyr Glu Gly Glu Arg Ala Arg Thr Lys Asp Asn Asn Leu Leu Gly Lys  
 450 455 460

Phe Glu Leu Ser Gly Ile Pro Pro Ala Pro Arg Gly Val Pro Gln Ile  
 465 470 475 480

Thr Val Cys Phe Asp Ile Asp Ala Asn Gly Ile Leu Asn Val Ser Ala  
 485 490 495

Glu Asp Lys Thr Thr Gly Gln Lys Asn Lys Ile Thr Ile Thr Asn Asp  
 500 505 510

Lys Gly Arg Leu Ser Lys Glu Glu Ile Glu Lys Met Val Gln Glu Ala  
 515 520 525

Glu Lys Tyr Lys Ala Glu Asp Glu Glu His Lys Lys Lys Val Asp Ala  
 530 535 540

Lys Asn Ala Leu Glu Asn Tyr Ala Tyr Asn Met Arg Asn Thr Ile Lys  
 545 550 555 560

Asp Glu Lys Ile Ala Ser Lys Leu Asp Ala Ala Asp Lys Lys Lys Ile  
 565 570 575

Glu Asp Ala Ile Asp Gln Ala Ile Glu Trp Leu Asp Gly Asn Gln Leu  
 580 585 590

Ala Glu Ala Asp Glu Phe Glu Asp Lys Met Lys Glu Leu Glu Ser Leu  
 595 600 605

Cys Asn Pro Ile Ile Ala Arg Met Tyr Gln Gly Ala Gly Pro Asp Met  
 610 615 620

Gly Gly Ala Gly Gly Met Asp Asp Asp Thr Pro Ala Gly Gly Ser Gly  
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Gly Ala Gly Pro Lys Ile Glu Glu Val Asp  
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<210> 1393

<211> 348

<212> DNA

<213> Arabidopsis thaliana

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gctcttggaa agcaaggtgt tgcgaagcca aagggaacccc tggaaagccct tcgtcccaag 240  
ttacagccaa cgcagcagca gacacgttac aggaagtctc catgtgtctc atctgaggggt 300  
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<210> 1394

<211> 115

<212> PRT

<213> *Arabidopsis thaliana*

<400> 1394

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20 25 30

Lys Lys Tyr Gly Gly Leu Met Pro Lys Lys Pro Pro Leu Ile Ser Lys  
35 40 45

Asp His Glu Arg Ala Tyr Phe Asp Ser Ala Asp Trp Ala Leu Gly Lys  
50 55 60

Gln Gly Val Ala Lys Pro Lys Gly Pro Leu Glu Ala Leu Arg Pro Lys  
65 70 75 80

Leu Gln Pro Thr Gln Gln Gln Thr Arg Tyr Arg Lys Ser Pro Cys Ala  
85 90 95

Pro Ser Glu Gly Gly Glu Asp Gly Gly Ala Ala Gln Ala Glu Gly Gly  
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Ser Gly Asn  
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<210> 1395

<211> 819

<212> DNA

<213> *Arabidopsis thaliana*

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tacactcttt ggactgggta cttaggttgg caatggagac gtgtccgtac gatacagagt   360
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gagaggaaag agttgggtaa agggctttac agagacaaac actttgacgc tggctctgtt   540
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<210> 1396

<211> 272

<212> PR1

<213> Arabidopsis thaliana

<400> 1396

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Thr His His Pro Lys Thr Leu Asn Ser Leu Lys Pro Ile Thr Thr Lys
      20             25             30

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Ser Gln Pro Cys Lys Thr Pro Glu Ile Pro Ser Thr Pro Asn Ala Leu
      35             40             45

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Gln Leu Leu Lys Ser Ser Ser Leu Pro Leu Ala Val Ile Ala Leu Pro
      50             55             60

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Phe Phe Leu Asp Pro Gln Asp Ala Ala Ala Ala Gly Gly Glu Phe Gly
      65             70             75             80

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Ile Leu Glu Gly Arg Ser Phe Ala Leu Ile His Pro Ile Val Met Gly  
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Gly Leu Phe Ala Tyr Thr Leu Trp Thr Gly Tyr Leu Gly Trp Gln Trp  
100 105 110

Arg Arg Val Arg Thr Ile Gln Ser Glu Ile Ser Asp Leu Lys Lys Gln  
115 120 125

Leu Lys Pro Thr Pro Val Ser Pro Asp Gly Ser Thr Ala Val Asp Ser  
130 135 140

Ser Ser Pro Pro Ser Thr Thr Glu Leu Gln Ile Gln Arg Leu Thr Glu  
145 150 155 160

Glu Arg Lys Glu Leu Val Lys Gly Ser Tyr Arg Asp Lys His Phe Asp  
165 170 175

Ala Gly Ser Val Leu Leu Gly Phe Gly Val Leu Glu Ala Val Phe Gly  
180 185 190

Gly Val Asn Thr Tyr Leu Arg Thr Gly Lys Leu Phe Pro Gly Pro His  
195 200 205

Leu Tyr Ala Gly Ala Gly Ile Thr Val Leu Trp Ala Ala Ala Ala Ala  
210 215 220

Leu Val Pro Ala Met Gln Lys Gly Asn Asp Thr Ala Arg Ser Leu His  
225 230 235 240

Ile Ala Leu Asn Ala Val Asn Val Leu Leu Phe Ile Trp Gln Ile Pro  
245 250 255

Thr Gly Leu Asp Ile Val Leu Lys Val Phe Glu Phe Thr Lys Trp Pro  
260 265 270

<210> 1397

<211> 1077

<212> DNA

<213> Arabidopsis thaliana

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acacggggaa agggcatttt ggcagcagac gagagcagg gaactattgg gaaacgattc 120  
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 ggaatcaaag tggacaaggg tgtggtgat ctagcaggaa ccaatggcga gaccactact 360  
 cagggtctag attcacttgg tgcacgttgc caggagtatt acaaggcagg agctcggttt 420  
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 ggcaactctg ttaaaccgaa catggctact ccggtctctg acagcccaaa ggttgaccgg 720  
 gaagtgatag cggaaatcac agtgactgct ctgcgccga cagtcccacc tgcagtcca 780  
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 caacaaagca ctctcaaggc ttgggcaggt aagacagaga atgtagccaa agctcaggcc 960  
 actttcctga ccagggtgcaa gggttaactcg gacgctacc tcgggaaata caccggcggtg 1020  
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<210> 1398

<211> 358

<212> PRT

<213> Arabidopsis thaliana

<400> 1398

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Lys Tyr Ile Ala Thr Pro Gly Lys Gly Ile Leu Ala Ala Asp Glu Ser  
 20 25 30

Thr Gly Thr Ile Gly Lys Arg Phe Ala Ser Ile Asn Val Glu Asn Ile  
 35 40 45

Glu Ser Asn Arg Gln Ala Leu Arg Glu Leu Leu Phe Thr Ser Pro Gly  
 50 55 60

Thr Phe Pro Cys Leu Ser Gly Val Ile Leu Phe Glu Glu Thr Leu Tyr  
 Page 2185

[illegible]



Thr Phe Leu Thr Arg Cys Lys Gly Asn Ser Asp Ala Thr Leu Gly Lys  
 325 330 335

Tyr Thr Gly Gly Ala Ser Gly Asp Ser Ala Ala Ser Glu Ser Leu Tyr  
 340 345 350

Glu Glu Gly Tyr Lys Tyr  
 355

<210> 1399

<211> 741

<212> DNA

<213> Arabidopsis thaliana

<400> 1399  
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 tctctctcct ctgttaatct ctctgaacag ctacggtctg gtgttttctt gaaaccaag 240  
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 aacctctcta taacttgggt tgatgacgtc aactattgga cttggtttac cgaaaaagag 360  
 tcaccaaagc agaatttgga agctgtggga ttgaaaaagc ttgtttggct cgacatcacg 420  
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 aagctagagg atccggccta tggatgggac acgccggtga acctaaagct agtcttgctt 540  
 aacggtaagg agaaccaca agagaaaaag gtgagtttga gggaacttcc aaggtataaa 600  
 tgggtcgatg tcagagttag cgagttcgta cctgagaaat ccgctgccgg agagatcact 660  
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<210> 1400

<211> 246

<212> PRT

<213> Arabidopsis thaliana

<400> 1400

Met Ser Lys Lys His Cys Ser Glu Leu Leu Pro Asn Lys Met Phe Arg  
 Page 2187

1 5 15  
Asn Gln Asp Ser Lys Tyr Leu Ile Pro Val Gln Lys Glu Ala Pro Pro  
20 25 30  
Val Thr Thr Leu Pro Met Lys Ala Ser Thr Val Lys Ser Pro His Asn  
35 40 45  
Cys Glu Ala Ile Leu Arg Asp Ala Asp Pro Pro Ile Ser Leu Ser Ser  
50 55 60  
Val Asn Leu Ser Glu Gln Leu Arg Ser Gly Val Phe Leu Lys Pro Lys  
65 70 75 80  
Lys Gln Ile Lys Tyr Trp Val Asp Glu Arg Asn Ser Asn Cys Phe Met  
85 90 95  
Leu Phe Ala Lys Asn Leu Ser Ile Thr Trp Ser Asp Asp Val Asn Tyr  
100 105 110  
Trp Thr Trp Phe Thr Glu Lys Glu Ser Pro Asn Glu Asn Val Glu Ala  
115 120 125  
Val Gly Leu Lys Asn Val Cys Trp Leu Asp Ile Thr Gly Lys Phe Asp  
130 135 140  
Thr Arg Asn Leu Thr Pro Gly Ile Val Tyr Glu Val Val Phe Lys Val  
145 150 155 160  
Lys Leu Glu Asp Pro Ala Tyr Gly Trp Asp Thr Pro Val Asn Leu Lys  
165 170 175  
Leu Val Leu Pro Asn Gly Lys Glu Lys Pro Gln Glu Lys Lys Val Ser  
180 185 190  
Leu Arg Glu Leu Pro Arg Tyr Lys Trp Val Asp Val Arg Val Gly Glu  
195 200 205  
Phe Val Pro Glu Lys Ser Ala Ala Gly Glu Ile Thr Phe Ser Met Tyr  
210 215 220  
Glu His Ala Ala Gly Val Trp Lys Lys Gly Leu Ser Leu Lys Gly Val  
225 230 235 240  
Ala Ile Arg Pro Lys Gln  
245

&lt;210&gt; 1401

&lt;211&gt; 843

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1401

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tggaccattg accaagccga tgcaaaagag gttattttgt acagatcagg actagtaact      240
gctgctgcat cttttgtagc tgcttcttct gctgcctttt taccaggaga ctcttggtta      300
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ggccttctta cattcatcat accttcagtt cttcttgggc atttgagtgg tctgatgaat      660
gatgaggtaa aactggtggt gctaggaaca tggatggctc tctttctagt atttgctgga      720
agaaagttta ctcagcctat taaggatgat atcggagata aatctgtttt caggttcattg      780
tccctttctg atgatgaaaa gaaggctata gttgaaaagc tcgagcaaga aaagtgggg      840
taa                                                                                   843

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&lt;210&gt; 1402

&lt;211&gt; 280

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1402

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Met Ala Ser Arg Leu Leu Ser Thr Thr Thr Leu Val Thr Pro Pro Ala
1           5           10           15

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Tyr Phe Asn Lys Ser Pro Ala Phe Leu Thr Ala Arg Val Gly Val Arg
          20           25           30

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Arg Gly Arg Ala Asn Val Lys Ala Val Ser Asn Ser Ser Gln Gly Ala
                                     Page 2189

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35

40

45

Val Asp Gly Thr Val Tyr Lys Gly Val Tyr Gly Pro Trp Thr Ile Asp  
 50 55 60  
 Gln Ala Asp Val Lys Glu Val Ile Leu Tyr Arg Ser Gly Leu Val Thr  
 65 70 75 80  
 Ala Ala Ala Ser Phe Val Ala Ala Ser Ser Ala Ala Phe Leu Pro Gly  
 85 90 95  
 Asp Ser Trp Leu Ser Glu Thr Ile Lys Gln Asn His Asp Leu Phe Tyr  
 100 105 110  
 Phe Val Gly Ala Ser Gly Leu Gly Leu Ser Leu Phe Leu Ile His Ile  
 115 120 125  
 Tyr Val Thr Glu Ile Lys Arg Thr Leu Gln Ala Leu Trp Ala Leu Gly  
 130 135 140  
 Phe Val Gly Ser Phe Ala Thr Tyr Ala Ala Leu Ala Arg Pro Ala Gly  
 145 150 155 160  
 Asp Asn Leu Val His Tyr Val Val Asp His Pro Ser Ala Val Trp Phe  
 165 170 175  
 Val Gly Pro Leu Phe Ala Ser Leu Thr Gly Leu Val Phe Lys Glu Gly  
 180 185 190  
 Leu Cys Tyr Gly Lys Leu Glu Ala Gly Leu Leu Thr Phe Ile Ile Pro  
 195 200 205  
 Ser Val Leu Leu Gly His Leu Ser Gly Leu Met Asn Asp Glu Val Lys  
 210 215 220  
 Leu Val Leu Leu Gly Thr Trp Met Ala Leu Phe Leu Val Phe Ala Gly  
 225 230 235 240  
 Arg Lys Phe Thr Gln Pro Ile Lys Asp Asp Ile Gly Asp Lys Ser Val  
 245 250 255  
 Phe Thr Phe Met Ser Leu Ser Asp Asp Glu Lys Lys Ala Ile Val Glu  
 260 265 270  
 Lys Leu Glu Gln Glu Lys Leu Gly  
 275 280

&lt;210&gt; 1403

&lt;211&gt; 1920

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1403

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gtgataaga tggttccatg gcataagctt ccagatttct tggggttaac ctatcttgaa      180
gtacgaagac atcttcacca acaatacaat ctcttcaacg tcggtcaaac tccgactggg      240
atcgggtttg atcctgctaa ttatccgtac cggactgctg acggaaaatt caatgatccc      300
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atgatccatg attggattga tcatcttgaa gacactcacc aaatcgaact tgtcgtcca      540
aaagaagtag cgagcaagtg tcccttaagc tcctttaggt tcttaagac caaggaagtc      600
cctaccggtt tcttcgaaat caagactggc tcgcaaaata tccgtacacc ttggtgggat      660
tcgagcgtca tctatggaag caactcgaaa acattggata gagtaagaac ttacaaagac      720
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gatttgtacc ggtacgctag gctagtgtac tcagccgtgg tagccaagat tcacaccata      960
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<210> 1404

<211> 639

<212> PRT

<213> Arabidopsis thaliana

<400> 1404

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Phe Leu Leu Leu Ile Val His Gly Val Asp Lys Met Val Pro Trp His  
 35 40 45

Lys Leu Pro Val Phe Leu Gly Leu Thr Tyr Leu Glu Val Arg Arg His  
 50 55 60

Leu His Gln Gln Tyr Asn Leu Leu Asn Val Gly Gln Thr Pro Thr Gly  
 65 70 75 80

Ile Arg Phe Asp Pro Ala Asn Tyr Pro Tyr Arg Thr Ala Asp Gly Lys  
 85 90 95

Phe Asn Asp Pro Phe Asn Glu Gly Val Gly Ser Gln Asn Ser Phe Phe  
 100 105 110

Gly Arg Asn Cys Pro Pro Val Asp Gln Lys Ser Lys Leu Arg Arg Pro  
 115 120 125

Asp Pro Met Val Val Ala Thr Lys Leu Leu Gly Arg Lys Lys Phe Ile  
 130 135 140

Asp Thr Gly Lys Gln Phe Asn Met Ile Ala Ala Ser Trp Ile Gln Phe  
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Met Ile His Asp Trp Ile Asp His Leu Glu Asp Thr His Gln Ile Glu  
165 170 175

Leu Val Ala Pro Lys Glu Val Ala Ser Lys Cys Pro Leu Ser Ser Phe  
180 185 190

Arg Phe Leu Lys Thr Lys Glu Val Pro Thr Gly Phe Phe Glu Ile Lys  
195 200 205

Thr Gly Ser Gln Asn Ile Arg Thr Pro Trp Trp Asp Ser Ser Val Ile  
210 215 220

Tyr Gly Ser Asn Ser Lys Thr Leu Asp Arg Val Arg Thr Tyr Lys Asp  
225 230 235 240

Gly Lys Leu Lys Ile Ser Glu Glu Thr Gly Leu Leu Leu His Asp Glu  
245 250 255

Asp Gly Leu Ala Ile Ser Gly Asp Ile Arg Asn Ser Trp Ala Gly Val  
260 265 270

Ser Ala Leu Gln Ala Leu Phe Ile Lys Glu His Asn Ala Val Cys Asp  
275 280 285

Ala Leu Lys Asp Glu Asp Asp Asp Leu Glu Asp Glu Asp Leu Tyr Arg  
290 295 300

Tyr Ala Arg Leu Val Thr Ser Ala Val Val Ala Lys Ile His Thr Ile  
305 310 315 320

Asp Trp Thr Val Gln Leu Leu Lys Thr Asp Thr Leu Leu Ala Gly Met  
325 330 335

Arg Ala Asn Trp Tyr Gly Leu Leu Gly Lys Lys Phe Lys Asp Ser Phe  
340 345 350

Gly His Ala Gly Ser Ser Ile Leu Gly Gly Val Val Gly Met Lys Lys  
355 360 365

Pro Gln Asn His Gly Val Pro Tyr Ser Leu Thr Glu Asp Phe Thr Ser  
370 375 380

Val Tyr Arg Met His Ser Leu Leu Pro Asp Gln Leu His Ile Leu Asp  
385 390 395 400

Ile Asp Asp Val Pro Gly Thr Asn Lys Ser Leu Pro Leu Ile Gln Glu

Ile Ser Met Arg Asp Leu Ile Gly Arg Lys Gly Glu Glu Thr Met Ser  
420 425 430

His Ile Gly Phe Thr Lys Leu Met Val Ser Met Gly His Gln Ala Ser  
435 440 445

Gly Ala Leu Glu Leu Met Asn Tyr Pro Met Trp Leu Arg Asp Ile Val  
450 455 460

Pro His Asp Pro Asn Gly Gln Ala Arg Pro Asp His Val Asp Leu Ala  
465 470 475 480

Ala Leu Glu Ile Tyr Arg Asp Arg Glu Arg Ser Val Pro Arg Tyr Asn  
485 490 495

Glu Phe Arg Arg Ser Met Phe Met Ile Pro Ile Thr Lys Trp Glu Asp  
500 505 510

Leu Thr Glu Asp Glu Glu Ala Ile Glu Val Leu Asp Asp Val Tyr Asp  
515 520 525

Gly Asp Val Glu Glu Leu Asp Leu Leu Val Gly Leu Met Ala Glu Lys  
530 535 540

Lys Ile Lys Gly Phe Ala Ile Ser Glu Thr Ala Phe Tyr Ile Phe Leu  
545 550 555 560

Ile Met Ala Thr Arg Arg Leu Glu Ala Asp Arg Phe Phe Thr Ser Asp  
565 570 575

Phe Asn Glu Thr Ile Tyr Thr Lys Lys Gly Leu Glu Trp Val Asn Thr  
580 585 590

Thr Glu Ser Leu Lys Asp Val Ile Asp Arg His Tyr Pro Asp Met Thr  
595 600 605

Asp Lys Trp Met Asn Ser Glu Ser Ala Phe Ser Val Trp Asp Ser Pro  
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Pro Leu Thr Lys Asn Pro Ile Pro Leu Tyr Leu Arg Ile Pro Ser  
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<210> 1405

<211> 1947



&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1405

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<210> 1406

<211> 648

<212> PRT

<213> Arabidopsis thaliana

<400> 1406

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 20 25 30

Pro Ile Lys Val His Leu Ala Val Tyr Ser Gly Leu Leu Leu Ile Ala  
 35 40 45

Leu Tyr Val Thr Leu Ile Val Thr His Asp Gly Ser Lys Ala Glu Ile  
 50 55 60

Ala Thr Glu Ser Arg Pro Arg Met Ala Gly Val Ser Glu Lys Ser Asn  
 65 70 75 80

Asp Gly Val Trp Ile Ser Ser Asp Asp Gly Lys Val Glu Ala Phe Pro  
 85 90 95

Trp Asn Asn Thr Ile Leu Ser Trp Gln Arg Thr Ala Phe His Phe Gln  
 100 105 110

Pro Glu Lys Asn Trp Met Asn Asp Pro Asn Gly Pro Leu Phe Tyr Lys  
 115 120 125

Gly Trp Tyr His Phe Phe Tyr Gln Tyr Asn Pro Asn Ala Ala Val Trp  
 130 135 140

Gly Asp Ile Val Trp Gly His Ala Val Ser Lys Asp Leu Ile His Trp  
 145 150 155 160

047-E2F-PCT.ST25.txt

Leu Tyr Leu Pro Ile Ala Met Val Pro Asp Gln Trp Tyr Asp Ala Asn  
165 170 175

Gly Val Trp Thr Gly Ser Ala Thr Phe Leu Asp Asp Gly Ser Ile Val  
180 185 190

Met Leu Tyr Thr Gly Ser Thr Asp Glu Phe Val Gln Val Gln Asn Leu  
195 200 205

Ala Tyr Pro Glu Asp Pro Ser Asp Pro Leu Leu Leu Lys Trp Val Lys  
210 215 220

Phe Ser Gly Asn Pro Val Leu Val Pro Pro Pro Gly Ile Gly Ala Lys  
225 230 235 240

Asp Phe Arg Asp Pro Thr Thr Ala Trp Lys Thr Ser Ser Gly Lys Trp  
245 250 255

Arg Ile Thr Ile Gly Ser Lys Ile Asn Arg Thr Gly Ile Ser Leu Ile  
260 265 270

Tyr Asp Thr Thr Asp Phe Lys Thr Tyr Glu Lys His Glu Thr Leu Leu  
275 280 285

His Gln Val Pro Asn Thr Gly Met Trp Glu Cys Val Asp Phe Tyr Pro  
290 295 300

Val Ser Lys Thr Gln Leu Asn Gly Leu Asp Thr Ser Val Asn Gly Pro  
305 310 315 320

Asp Val Lys His Val Ile Lys Ala Ser Met Asp Asp Thr Arg Ile Asp  
325 330 335

His Tyr Ala Ile Gly Thr Tyr Asp Asp Ser Asn Ala Thr Trp Val Pro  
340 345 350

Asp Asn Pro Ser Ile Asp Val Gly Ile Ser Thr Gly Leu Arg Tyr Asp  
355 360 365

Tyr Gly Lys Tyr Tyr Ala Ser Lys Thr Phe Tyr Asp Gln Asn Lys Gly  
370 375 380

Arg Arg Ile Leu Trp Gly Trp Ile Gly Glu Ser Asp Ser Glu Ala Ala  
385 390 395 400

Asp Val Gln Lys Gly Trp Ser Ser Val Gln Gly Ile Pro Arg Thr Val  
405 410 415

047-E2F-PCT.ST25.txt

Val Leu Asp Thr Arg Thr His Lys Asn Leu Val Gln Trp Pro Val Glu  
420 425 430

Glu Ile Lys Ser Leu Arg Leu Ser Ser Lys Lys Phe Asp Met Thr Ile  
435 440 445

Gly Pro Gly Thr Val Val Pro Val Asp Val Gly Ser Ala Thr Gln Leu  
450 455 460

Asp Ile Glu Ala Glu Phe Glu Ile Lys Thr Asp Asn Leu Lys Leu Phe  
465 470 475 480

Phe Asp Asp Asp Ser Val Glu Ala Asp Asn Lys Phe Ser Cys Glu Thr  
485 490 495

Asn Gly Gly Ser Thr Ala Arg Gly Ala Leu Gly Pro Phe Gly Phe Ser  
500 505 510

Val Leu Ala Asp Glu Gly Leu Ser Glu Gln Thr Pro Val Tyr Phe Tyr  
515 520 525

Val Thr Lys Gly Lys His Ser Lys Leu Asn Thr Val Phe Cys Thr Asp  
530 535 540

Thr Ser Arg Ser Thr Leu Ala Asn Asp Val Val Lys Pro Ile Tyr Gly  
545 550 555 560

Ser Phe Val Pro Val Leu Lys Gly Glu Lys Leu Thr Met Arg Ile Leu  
565 570 575

Val Asp His Ser Ile Val Glu Gly Phe Ala Gln Gly Gly Arg Ser Cys  
580 585 590

Ile Thr Ser Arg Val Tyr Pro Thr Lys Ala Ile Tyr Gly Ala Thr Lys  
595 600 605

Leu Phe Leu Phe Asn Asn Ala Ile Asp Ala Thr Val Thr Ala Ser Phe  
610 615 620

Thr Val Trp Gln Met Asn Asn Ala Phe Ile His Pro Tyr Ser Ser Asp  
625 630 635 640

Asp Leu Gly Val Pro Ser Ser Thr  
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<210> 1407

&lt;211&gt; 465

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1407

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gatagcttgc tggggagcaa caagttattt ccccaaccca ttctctcac cgaaatgggtg    420
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&lt;210&gt; 1408

&lt;211&gt; 154

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1408

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          20          25          30
Pro Ser Val Ser Glu Asp Phe Trp Ser Thr Ser Thr Val Asp Met Asp
          35          40          45
Asn Ile Thr Phe Pro Ser Gln Gly Ser Leu Ser Ser Asn Gln Thr
          50          55          60
Phe Asp Ser Gln Ser Ala Ala Arg Asn Ser Asn Ala Pro Pro Glu Tyr
65          70          75          80
Val Asn Gln Gly Leu Leu Leu Trp Asn Gln Thr Arg Glu Arg Trp Val
          85          90          95
Gly Lys Asp Lys Pro Asn Asn Pro Val Asp His Asn Gln Gly Ala Lys

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100

Leu Asn Trp Asn Thr Ala Thr Tyr Asp Ser Leu Leu Gly Ser Asn Lys  
115 120 125

Leu Phe Pro Gln Pro Ile Pro Leu Thr Glu Met Val Asp Phe Leu Val  
130 135 140

Asp Ile Trp Glu Gln Glu Gly Leu Tyr Asp  
145 150

<210> 1409

<211> 519

<212> DNA

<213> Arabidopsis thaliana

<400> 1409  
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accggagaga aagggtgttg cggtagccga aaaccccttc acttcaaggg atctaagttt 180  
caccgtgtga tccttaactt catgtgccag ggaggagatt tcaccgccg gaacggaaca 240  
ggcgggtgag cgaatctacg gagcaagttc gaggacgaga atttcgagag gaacacacc 300  
ggaccgggga tcctgtcgat ggcgaacgcc ggtgcaaaca cgaacggatc tcagttcttc 360  
atctgcaccg tgaagaccga ttggcttgat ggaagacacg tgggtgtttg gcaggtcgtg 420  
gaaggttag acgtggtaaa ggccatcgag aagggttgat catcatctg aaagccgacg 480  
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<210> 1410

<211> 172

<212> PRT

<213> Arabidopsis thaliana

<400> 1410

Met Ala Phe Pro Lys Val Tyr Phe Asp Met Thr Ile Asp Gly Gln Pro  
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20 25 30

Ala Glu Asn Phe Arg Ala Leu Cys Thr Gly Glu Lys Gly Val Gly Gly  
 35 40 45  
 Thr Gly Lys Pro Leu His Phe Lys Gly Ser Lys Phe His Arg Val Ile  
 50 55 60  
 Pro Asn Phe Met Cys Gln Gly Gly Asp Phe Thr Ala Gly Asn Gly Thr  
 65 70 75 80  
 Gly Gly Glu Ser Ile Tyr Gly Ser Lys Phe Glu Asp Glu Asn Phe Glu  
 85 90 95  
 Arg Lys His Thr Gly Pro Gly Ile Leu Ser Met Ala Asn Ala Gly Ala  
 100 105 110  
 Asn Thr Asn Gly Ser Gln Phe Phe Ile Cys Thr Val Lys Thr Asp Trp  
 115 120 125  
 Leu Asp Gly Lys His Val Val Phe Gly Gln Val Val Glu Gly Leu Asp  
 130 135 140  
 Val Val Lys Ala Ile Glu Lys Val Gly Ser Ser Ser Gly Lys Pro Thr  
 145 150 155 160  
 Lys Pro Val Val Val Ala Asp Cys Gly Gln Leu Ser  
 165 170

&lt;210&gt; 1411

&lt;211&gt; 567

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1411

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ggcgtcaatc tcgagttata taacgaaccc acgaatgatt accacgcaaa gcttggtttg	180
aagcctctat gtcagaaaag gaagtgggaag ttatatatg agccgctaca ccaagaagtt	240
cgtgttttat cgaagaagat tctgtcacc agatttctaa acctccaggt tgggtgtgga	300
cataactttc aaatgaatgc aattgggttg aaatggaagc ttacttcatg ttgggttgga	360
gatggtgtgt ctcggaattc aaataaaact actcttggtc ttagtcctgg tatcgatttc	420

cggtttggat ggagagctga tttgtactc ccagaggta ctggggccct tggactgag 480  
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<210> 1412

<211> 188

<212> PRT

<213> Arabidopsis thaliana

<400> 1412

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 Lys Glu Leu Gln Gly Leu Arg Val Gly Val Asn Leu Glu Leu Tyr Asn  
 35 40 45  
 Glu Pro Thr Asn Asp Tyr His Ala Lys Leu Val Leu Lys Pro Leu Cys  
 50 55 60  
 Pro Glu Arg Lys Trp Lys Phe Ile Tyr Glu Pro Leu His Gln Glu Val  
 65 70 75 80  
 Arg Val Leu Ser Lys Lys Ile Pro Val Thr Arg Phe Leu Asn Leu Gln  
 85 90 95  
 Val Gly Val Gly His Asn Phe Gln Met Asn Ala Ile Gly Trp Lys Trp  
 100 105 110  
 Lys Leu Thr Ser Cys Leu Gly Gly Asp Gly Val Ser Arg Ile Arg Asn  
 115 120 125  
 Lys Thr Thr Leu Gly Leu Ser Pro Gly Ile Asp Phe Arg Phe Gly Trp  
 130 135 140  
 Arg Ala Asp Phe Val Leu Pro Glu Val Thr Gly Ala Leu Gly Thr Glu  
 145 150 155 160  
 Glu Pro Leu Phe Asn Met Ser Ser Gly Arg Leu Glu Ala Ser Leu Asp  
 165 170 175



Arg Val Glu Ala Ile Val Thr His Ser Asp Tyr Leu  
 180 185

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<210> 1413  
 <211> 1494  
 <212> DNA  
 <213> Arabidopsis thaliana

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 gttgcagatg ctctaatact aaaccgactc ttgggacatc tgtttagcaa tgggtgttatt 780  
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 gcggttgatt accggaact aacttcggct gagcaaggat tctacttcat tggtaaagat 960  
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 gagctctgcg tggataacga attaggtttc gcaaaagaca gaaccatcag tagattaaca 1440

gaaatgaaca gcaaagaata cttggagcac catgccataa cacacaatct gtaa

1494

&lt;210&gt; 1414

&lt;211&gt; 497

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1414

Met Arg Pro Ile Ile Arg Leu Ser Ser Leu Ser Arg Ile Arg Trp Ala  
1 5 10 15Leu Arg Asn Asn Gln Glu Arg Tyr Ser Ser Thr Phe Tyr Ser Lys Ser  
20 25 30Arg Lys Leu Leu Ile Gly Val Asn Gln Asn Gln Ala Leu Leu Asn Thr  
35 40 45Asn Thr Asp Asn Ser Ser Leu Tyr Ser Arg Ser Ser Ile Phe Arg Gly  
50 55 60Leu Ser Ala Glu Ala Val Glu Ala Ala Asp Pro Ala Thr Thr Arg Val  
65 70 75 80Thr Val Ser Asp Val Asn Arg Thr Gly Pro Leu Val Glu Tyr Glu Arg  
85 90 95Arg Ile Ser Asn Gly Glu Leu Met Thr Gly Asp Ile Cys Gln Ile Ser  
100 105 110Ala Leu Arg Glu Leu Gln Arg Leu Tyr Asp Glu Leu Val Asp Ser Val  
115 120 125Asp Thr Cys Arg Leu Asp Arg Tyr Asn Thr Ser Asp Lys Ser Ser Arg  
130 135 140Ser Arg Trp Phe Trp Ser Arg Leu Met Pro Gln Thr Ser Tyr Ser Pro  
145 150 155 160Val Lys Gly Leu Tyr Leu Tyr Gly Gly Val Gly Thr Gly Lys Thr Met  
165 170 175Leu Met Asp Leu Phe Phe Asp Gln Leu Pro Cys Thr Trp Lys Lys Gln  
180 185 190

Arg Ile His Phe His Asp Phe Met Leu Ser Val His Ser Arg Leu Gln  
 195 200 205  
 Lys His Lys Gly Leu Ser Asp Pro Leu Glu Val Val Ala Gln Glu Ile  
 210 215 220  
 Ala His Asp Ala Ile Leu Leu Cys Leu Asp Glu Phe Met Val Thr Asp  
 225 230 235 240  
 Val Ala Asp Ala Leu Ile Leu Asn Arg Leu Phe Gly His Leu Phe Ser  
 245 250 255  
 Asn Gly Val Ile Leu Val Ala Thr Ser Asn Arg Asn Pro Asp Lys Leu  
 260 265 270  
 Tyr Glu Gly Gly Leu Gln Arg Asp Leu Phe Leu Pro Phe Ile Ser Ser  
 275 280 285  
 Leu Lys Glu Arg Ser Val Val His Glu Ile Gly Ser Ala Val Asp Tyr  
 290 295 300  
 Arg Lys Leu Thr Ser Ala Glu Gln Gly Phe Tyr Phe Ile Gly Lys Asp  
 305 310 315 320  
 Leu Ser Thr Leu Leu Lys Gln Lys Phe Arg Gln Leu Ile Gly Asp Asn  
 325 330 335  
 Val Val Ala Arg Pro Gln Val Val Glu Val Val Met Gly Arg Lys Leu  
 340 345 350  
 Gln Ile Pro Leu Gly Ala Asn Gly Cys Ala Tyr Phe Pro Phe Glu Glu  
 355 360 365  
 Leu Cys Asp Arg Pro Leu Gly Ala Ala Asp Tyr Phe Gly Leu Phe Lys  
 370 375 380  
 Lys Phe His Thr Leu Ala Leu Asp Glu Ile Pro Val Phe Gly Leu His  
 385 390 395 400  
 Asn Arg Thr Ala Ala Tyr Arg Phe Val Thr Leu Val Asp Val Met Tyr  
 405 410 415  
 Glu Asn Arg Ala Arg Leu Leu Cys Thr Ala Glu Ala Asn Pro Gln Glu  
 420 425 430  
 Leu Leu Glu Lys Ile Ile Thr Ile Ser Glu Ala Lys Ser Met Gly Pro  
 435 440 445

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Arg Thr Ser Ser Arg Ser Arg Lys Asn Asp Val Thr Glu Leu Cys Val  
450 455 460

Asp Asn Glu Leu Gly Phe Ala Lys Asp Arg Thr Ile Ser Arg Leu Thr  
465 470 475 480

Glu Met Asn Ser Lys Glu Tyr Leu Glu His His Ala Ile Thr His Asn  
485 490 495

Leu

<210> 1415

<211> 1230

<212> DNA

<213> Arabidopsis thaliana

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gttatctctg ttgctaagaa tgtgcttcag aaagctggat ctctcgaagg actggagttt 240  
gatttcaagg agatgcctgt cggaggagca gccttggtatt tggttggagt tccattgccg 300  
gaggaactt tcacggctgc aaaaactatct gatgccattc ttcttgaggc tattggaggg 360  
tacaaatggg acaagaatga gaaacatctg agacctgaga tggctctgtt ttaccttaga 420  
agagatctca aagtctttgc taatttgaga cctgctacag ttttgccaca gctagttgat 480  
gcttccacac tgaagaaaga agtagcagaa ggtgttgata tgatgattgt tagggagctc 540  
acaggaggta tttactttgg agagccaaga ggcattacga tcaatgaaaa tggcgaagaa 600  
gtcggcggtta gtacagagat ctacgctgct cagcagattg acagaattgc tctgttagca 660  
ttcgagactg ctaggaaaaa gcgtggcaaa ctttgttctg ttgacaaagc caatgtgttg 720  
gatgcatcaa tatttgaggg gaaaagagta acagctttag cctctgaata tccagatgtt 780  
gaactatcac atatgtatgt cgataatgct gcaatgcagc ttattctgta cccgaaacag 840  
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tttgaaccta tacatggttc agcaccagat atagctggac aagacaaggc aaaccattg 1020  
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<210> 1416

<211> 409

<212> PRT

<213> Arabidopsis thaliana

<400> 1416

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20 25 30

Tyr Arg Ile Arg Cys Ala Ala Ala Ser Pro Gly Lys Lys Arg Tyr Asn  
35 40 45

Ile Ala Leu Leu Pro Gly Asp Gly Ile Gly Pro Glu Val Ile Ser Val  
50 55 60

Ala Lys Asn Val Leu Gln Lys Ala Gly Ser Leu Glu Gly Leu Glu Phe  
65 70 75 80

Asp Phe Lys Glu Met Pro Val Gly Gly Ala Ala Leu Asp Leu Val Gly  
85 90 95

Val Pro Leu Pro Glu Glu Thr Phe Thr Ala Ala Lys Leu Ser Asp Ala  
100 105 110

Ile Leu Leu Gly Ala Ile Gly Gly Tyr Lys Trp Asp Lys Asn Glu Lys  
115 120 125

His Leu Arg Pro Glu Met Ala Leu Phe Tyr Leu Arg Arg Asp Leu Lys  
130 135 140

Val Phe Ala Asn Leu Arg Pro Ala Thr Val Leu Pro Gln Leu Val Asp  
145 150 155 160

Ala Ser Thr Leu Lys Lys Glu Val Ala Glu Gly Val Asp Met Met Ile  
165 170 175

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Val Arg Glu <sup>Leu</sup> Thr Gly Gly Ile <sup>Tyr</sup> Phe Gly Glu Pro Arg Gly Ile  
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 Thr Ile Asn Glu Asn Gly Glu <sup>Glu</sup> Val Gly Val Ser <sup>Thr</sup> Glu Ile Tyr  
                   195                  200                  205  
 Ala Ala His Glu Ile Asp <sup>Arg</sup> Ile Ala Arg Val <sup>Ala</sup> Phe Glu Thr Ala  
                   210                  215                  220  
 Arg Lys Arg Arg Gly <sup>Lys</sup> Leu Cys Ser Val <sup>Asp</sup> Lys Ala Asn Val <sup>Leu</sup>  
                   225                  230                  235                  240  
 Asp Ala Ser Ile <sup>Leu</sup> Trp Arg Lys Arg Val <sup>Thr</sup> Ala Leu Ala <sup>Ser</sup> Glu  
                   245                  250                  255  
 Tyr Pro Asp Val <sup>Glu</sup> Leu Ser His <sup>Met</sup> Tyr Val Asp Asn <sup>Ala</sup> Ala Met  
                   260                  265                  270  
 Gln Leu <sup>Ile</sup> Arg Asp Pro Lys <sup>Gln</sup> Phe Asp Thr Ile <sup>Val</sup> Thr Asn Asn  
                   275                  280                  285  
 Ile <sup>Phe</sup> Gly Asp Ile Leu <sup>Ser</sup> Asp Glu Ala Ser <sup>Met</sup> Ile Thr Gly Ser  
                   290                  295                  300  
 Ile Gly Met Leu Pro <sup>Ser</sup> Ala Ser Leu Gly <sup>Glu</sup> Ser Gly Pro Gly <sup>Leu</sup>  
                   305                  310                  315                  320  
 Phe Glu Pro Ile <sup>His</sup> Gly Ser Ala Pro <sup>Asp</sup> Ile Ala Gly Gln <sup>Asp</sup> Lys  
                   325                  330                  335  
 Ala Asn Pro <sup>Leu</sup> Ala Thr Ile Leu <sup>Ser</sup> Ala Ala Met Leu <sup>Leu</sup> Lys Tyr  
                   340                  345                  350  
 Gly Leu <sup>Gly</sup> Glu Glu Lys Ala <sup>Ala</sup> Lys Arg Ile Glu <sup>Asp</sup> Ala Val Val  
                   355                  360                  365  
 Asp Ala Leu Asn Lys Gly <sup>Phe</sup> Arg Thr Gly Asp <sup>Ile</sup> Tyr Ser Pro Gly  
                   370                  375                  380  
 Asn Lys Leu Val Gly <sup>Cys</sup> Lys Glu Met Gly <sup>Glu</sup> Glu Val Leu Lys <sup>Ser</sup>  
                   385                  390                  395                  400  
 Val Glu Ser Lys <sup>Val</sup> Pro Ala Thr Val  
                   405

&lt;210&gt; 1417

&lt;211&gt; 651

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1417

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ctccaccgtc tccaatctgt ttcttcgcc gttaaagctc cgtcgaaagc gttgacagtt    180
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aacgcaggcg ggagattggc atgtggtgtg attggcttga cgccgctcta a              651

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&lt;210&gt; 1418

&lt;211&gt; 216

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1418

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Met Ala Ala Thr   Asn Thr Ile Leu Ala Phe Ser Ser Pro Ser Arg Leu
 1           5           10
Leu Ile Pro Pro Ser Ser Asn Pro Ser Thr Leu Arg Ser Ser Phe Arg
          20           25           30
Gly Val Ser Leu Asn Asn Asn Asn Leu His Arg Leu Gln Ser Val Ser
          35           40           45
Phe Ala Val Lys Ala Pro Ser Lys Ala Leu Thr Val Val Ser Ala Ala
          50           55           60
Lys Lys Ala Val Ala Val Leu Lys Gly Thr Ser Asp Val Glu Gly Val
65           70           75           80

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Val Thr Leu Thr Gln Asp Asp Ser Gly Pro Thr Thr Val Asn Val Arg  
85 90 95

Ile Thr Gly Leu Thr Pro Gly Pro His Gly Phe His Leu His Glu Phe  
100 105 110

Gly Asp Thr Thr Asn Gly Cys Ile Ser Thr Gly Pro His Phe Asn Pro  
115 120 125

Asn Asn Met Thr His Gly Ala Pro Glu Asp Glu Cys Arg His Ala Gly  
130 135 140

Asp Leu Gly Asn Ile Asn Ala Asn Ala Asp Gly Val Ala Glu Thr Thr  
145 150 155 160

Ile Val Asp Asn Gln Ile Pro Leu Thr Gly Pro Asn Ser Val Val Gly  
165 170 175

Arg Ala Phe Val Val His Glu Leu Lys Asp Asp Leu Gly Lys Gly Gly  
180 185 190

His Glu Leu Ser Leu Thr Thr Gly Asn Ala Gly Gly Arg Leu Ala Cys  
195 200 205

Gly Val Ile Gly Leu Thr Pro Leu  
210 215

<210> 1419

<211> 1533

<212> DNA

<213> Arabidopsis thaliana

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caatgggtgc tgaagccaaa gactgtcaaa tacgatttca aaacagacac tcgtgtcccc 180  
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tactttggtt cacttactca agcttcacg attcgtgttg gctcttaca ttgtgaagag 360  
atctatgctc ctttcaagag tcttcttcca atggtgaatc cagaggatgt tgtgtttggt 420  
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<210> 1420

<211> 510

<212> PRT

<213> Arabidopsis thaliana

<400> 1420

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20 25 30

His Glu Asn Arg Asn Gly Thr Tyr Gln Trp Val Val Lys Pro Lys Thr  
35 40 45

Val Lys Tyr Asp Phe Lys Thr Asp Thr Arg Val Pro Lys Leu Gly Val  
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50

55

60

Met Leu Val Gly Trp Gly Gly Asn Asn Gly Ser Thr Leu Thr Ala Gly  
 65 70 75 80  
 Val Ile Ala Asn Lys Glu Gly Ile Ser Trp Ala Thr Lys Asp Lys Val  
 85 90 95  
 Gln Gln Ala Asn Tyr Phe Gly Ser Leu Thr Gln Ala Ser Ser Ile Arg  
 100 105 110  
 Val Gly Ser Tyr Asn Gly Glu Glu Ile Tyr Ala Pro Phe Lys Ser Leu  
 115 120 125  
 Leu Pro Met Val Asn Pro Glu Asp Val Val Phe Gly Gly Trp Asp Ile  
 130 135 140  
 Ser Asp Met Asn Leu Ala Asp Ala Met Ala Arg Ala Arg Val Leu Asp  
 145 150 155 160  
 Ile Asp Leu Gln Lys Gln Leu Arg Pro Tyr Met Glu Asn Met Ile Pro  
 165 170 175  
 Leu Pro Gly Ile Tyr Asp Pro Asp Phe Ile Ala Ala Asn Gln Gly Ser  
 180 185 190  
 Arg Ala Asn Ser Val Ile Lys Gly Thr Lys Lys Glu Gln Val Asp His  
 195 200 205  
 Ile Ile Lys Asp Met Arg Glu Phe Lys Glu Lys Asn Lys Val Asp Lys  
 210 215 220  
 Leu Val Val Leu Trp Thr Ala Asn Thr Glu Arg Tyr Ser Asn Val Ile  
 225 230 235 240  
 Val Gly Leu Asn Asp Thr Thr Glu Asn Leu Leu Ala Ser Val Glu Lys  
 245 250 255  
 Asp Glu Ser Glu Ile Ser Pro Ser Thr Leu Tyr Ala Ile Ala Cys Val  
 260 265 270  
 Leu Glu Gly Ile Pro Phe Ile Asn Gly Ser Pro Gln Asn Thr Phe Val  
 275 280 285  
 Pro Gly Leu Ile Glu Leu Ala Ile Ser Lys Asn Cys Leu Ile Gly Gly  
 290 295 300

Asp Asp Phe Lys Ser Gly Gln Thr Lys Met Lys Ser Val Leu Val Asp  
 305 310 315 320

Phe Leu Val Gly Ala Gly Ile Lys Pro Thr Ser Ile Val Ser Tyr Asn  
 325 330 335

His Leu Gly Asn Asn Asp Gly Met Asn Leu Ser Ala Pro Gln Thr Phe  
 340 345 350

Arg Ser Lys Glu Ile Ser Lys Ser Asn Val Val Asp Asp Met Val Ala  
 355 360 365

Ser Asn Gly Ile Leu Phe Glu Pro Gly Glu His Pro Asp His Val Val  
 370 375 380

Val Ile Lys Tyr Val Pro Tyr Val Ala Asp Ser Lys Arg Ala Met Asp  
 385 390 395 400

Glu Tyr Thr Ser Glu Ile Phe Met Gly Gly Arg Asn Thr Ile Val Leu  
 405 410 415

His Asn Thr Cys Glu Asp Ser Leu Leu Ala Ala Pro Ile Ile Leu Asp  
 420 425 430

Leu Val Leu Leu Ala Glu Leu Ser Thr Arg Ile Gln Phe Lys Ala Glu  
 435 440 445

Gly Glu Gly Lys Phe His Ser Phe His Pro Val Ala Thr Ile Leu Ser  
 450 455 460

Tyr Leu Thr Lys Ala Pro Leu Val Pro Pro Gly Thr Pro Val Val Asn  
 465 470 475 480

Ala Leu Ser Lys Gln Arg Ala Met Leu Glu Asn Ile Leu Arg Ala Cys  
 485 490 495

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<210> 1421

<211> 1428

<212> DNA

<213> Arabidopsis thaliana

<400> 1421

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&lt;210&gt; 1422

&lt;211&gt; 475

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1422

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 35 40 45  
 Lys Val Lys Ala Arg Gln Ile Leu Asp Ser Arg Gly Ile Pro Thr Val  
 50 55 60  
 Glu Val Asp Leu His Thr Asn Lys Gly Val Phe Arg Ala Ser Val Pro  
 65 70 75 80  
 Ser Gly Asp Ser Ser Gly Thr Tyr Glu Ala Ile Glu Leu Arg Asp Gly  
 85 90 95  
 Asp Lys Gly Met Tyr Leu Gly Asn Ser Val Ala Lys Ala Val Lys Asn  
 100 105 110  
 Ile Asn Glu Lys Ile Ser Glu Ala Leu Ile Gly Met Asp Pro Lys Leu  
 115 120 125  
 Gln Gly Gln Ile Asp Gln Ala Met Ile Asp Leu Asp Lys Thr Glu Lys  
 130 135 140  
 Lys Ser Glu Leu Gly Ala Asn Ala Ile Leu Ala Val Ser Ile Ala Ala  
 145 150 155 160  
 Cys Lys Ala Gly Ala Ala Glu Lys Glu Val Pro Leu Cys Lys His Leu  
 165 170 175  
 Ser Asp Leu Ser Gly Arg Ala Asn Met Val Leu Pro Val Pro Ala Phe  
 180 185 190  
 Thr Val Leu Ser Gly Gly Lys His Ala Ser Asn Thr Phe Ala Ile Gln  
 195 200 205  
 Glu Ile Met Ile Leu Pro Ile Gly Ala Ser Arg Phe Glu Glu Ala Leu  
 210 215 220  
 Gln Trp Gly Ser Glu Thr Tyr His His Leu Lys Ala Val Ile Ser Glu  
 225 230 235 240  
 Lys Asn Gly Gly Leu Gly Cys Asn Val Gly Glu Asp Gly Gly Leu Ala  
 245 250 255  
 Pro Asp Ile Ser Ser Leu Lys Glu Gly Leu Glu Leu Val Lys Glu Ala  
 Page 2215

Ile Asn Arg Thr Gly Tyr Asn Asp Lys Ile Lys Ile Ala Ile Asp Ile  
 275 280

Ala Ala Thr Asn Phe Cys Leu Gly Thr Lys Tyr Asp Leu Asp Ile Lys  
 290 295 300

Ser Pro Asn Lys Ser Gly Gln Asn Phe Lys Ser Ala Glu Asp Met Ile  
 305 310 315 320

Asp Met Tyr Lys Glu Ile Cys Asn Asp Tyr Pro Ile Val Ser Ile Glu  
 325 330 335

Asp Pro Phe Asp Lys Glu Asp Trp Glu His Thr Lys Tyr Phe Ser Ser  
 340 345 350

Leu Gly Ile Cys Gln Val Val Gly Asp Asp Leu Leu Met Ser Asn Ser  
 355 360 365

Lys Arg Val Glu Arg Ala Ile Gln Glu Ser Ser Cys Asn Ala Leu Leu  
 370 375 380

Leu Lys Val Asn Gln Ile Gly Thr Val Thr Glu Ala Ile Glu Val Val  
 385 390 395 400

Lys Met Ala Arg Asp Ala Gln Trp Gly Val Val Thr Ser His Arg Cys  
 405 410 415

Gly Glu Thr Glu Asp Ser Phe Ile Ser Asp Leu Ser Val Gly Leu Ala  
 420 425 430

Thr Gly Val Ile Lys Ala Gly Ala Pro Cys Arg Gly Glu Arg Thr Met  
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Lys Tyr Asn Gln Leu Leu Arg Ile Glu Glu Glu Leu Gly Asp Gln Ala  
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Val Tyr Ala Gly Glu Asp Trp Lys Leu Ser Leu  
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<210> 1423

<211> 639

<212> DNA

<213> Arabidopsis thaliana

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<210> 1424

<211> 212

<212> PRT

<213> Arabidopsis thaliana

<400> 1424

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Met Ala Thr Val Thr Ile Leu Ser Pro Lys Ser Ile Pro Lys Val Thr
1           5           10          15

```

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Asp Ser Lys Phe Gly Ala Arg Val Ser Asp Gln Ile Val Asn Val Val
          20          25          30

```

```

Lys Cys Gly Lys Ser Gly Arg Arg Leu Lys Leu Ala Lys Leu Val Ser
          35          40          45

```

```

Ala Ala Gly Leu Ser Gln Ile Glu Pro Asp Ile Asn Glu Asp Pro Ile
          50          55          60

```

```

Gly Gln Phe Glu Thr Asn Ser Ile Glu Met Glu Asp Phe Lys Tyr Gly
65          70          75          80

```

```

Tyr Tyr Asp Gly Ala His Thr Tyr Tyr Glu Gly Glu Val Gln Lys Gly
          85          90          95

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```

Thr Phe Trp Gly Ala Ile Ala Asp Asp Ile Ala Ala Val Asp Gln Thr

```

Asn Gly Phe Gln Gly Leu Ile Ser Cys Met Phe Leu Pro Ala Ile Ala  
115 120

Leu Gly Met Tyr Phe Asp Ala Pro Gly Glu Tyr Leu Phe Ile Gly Ala  
130 135 140

Ala Leu Phe Thr Val Val Phe Cys Ile Ile Glu Met Asp Lys Pro Asp  
145 150 155 160

Gln Pro His Asn Phe Glu Pro Gln Ile Tyr Lys Leu Glu Arg Gly Ala  
165 170 175

Arg Asp Lys Leu Ile Asn Asp Tyr Asn Thr Met Ser Ile Trp Asp Phe  
180 185 190

Asn Asp Lys Tyr Gly Asp Val Trp Asp Phe Thr Ile Glu Lys Asp Asp  
195 200 205

Ile Ala Thr Arg  
210

<210> 1425

<211> 1314

<212> DNA

<213> Arabidopsis thaliana

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cacgtcaagg aggagctga gggcacacaa gttgaacatg tagatgattc aaagtgtatg 240  
aaaggcgaaa aagctcaacg gaagccaagg catgagaaac tatcaggctg taagaataat 300  
tcacgtggtc acatcaaaaa gagcaaaagg ggcaaaaagt cagatgctaa agtggcagca 360  
tcaaattggtt ctgttgctcc taatgtacag acaacaatc ctcttaagag caaatcattc 420  
aatgggcgag aggcacaagt cacaagcaa ggaagcatg actctgcacc tgctgaaagc 480  
gctgatgggg agaaggtgaa accaaagtct caaaagaaac aagcccatga gacatctgaa 540  
gatgatactc agtcttctaa tagtccgaaa gcagacgatg gaaaacctcg taaagtgggt 600  
gcacttcaa attatggatt cagtttcaaa tgtgaccaac gggctgaaaa gagaaaagag 660



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&lt;210&gt; 1426

&lt;211&gt; 437

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1426

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```

Ala Asn Gly Gly Leu Ala Met Glu Asn Val Cys Val Lys Glu Asn Gly
20 25 30

```

```

Ala Val Ser Val Glu Thr Val Asp Thr Thr Ser Glu Ser Gln Asn Glu
35 40 45

```

```

Asn Ser Ala Asn Ser Thr Leu Asp Thr Ile Glu His Val Lys Glu
50 55 60

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Ala Ala Glu Gly Thr Gln Val Glu His Val Asp Asp Ser Lys Cys Met
65 70 75 80

```

```

Lys Gly Glu Lys Ala Gln Arg Lys Pro Arg His Glu Lys Leu Ser Gly
85 90 95

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Gly Lys Asn Asn Ser Ser Val His Ile Lys Lys Ser Lys Glu Gly Lys
100 105 110

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047-E2F-PCT.ST25.txt

Ser Ala Asp Ala Lys Val Ala Ala Ser Asn Gly Ser Val Ala Pro Asn  
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Val Gln Thr Thr Asn Pro Leu Lys Ser Lys Ser Phe Asn Gly Arg Glu  
130 135 140

Ala Gln Val Thr Lys Gln Gly Lys His Asp Ser Ala Pro Ala Glu Ser  
145 150 155 160

Ala Asp Gly Glu Lys Val Lys Pro Lys Ser Gln Lys Lys Gln Ala His  
165 170 175

Glu Thr Ser Glu Asp Asp Thr Gln Ser Asn Ser Pro Lys Ala Asp  
180 185 190

Asp Gly Lys Pro Arg Lys Val Gly Ala Leu Pro Asn Tyr Gly Phe Ser  
195 200 205

Phe Lys Cys Asp Gln Arg Ala Glu Lys Arg Lys Glu Phe Tyr Val Lys  
210 215 220

Leu Glu Glu Lys Thr His Ala Lys Glu Glu Glu Ile Asn Ser Met Gln  
225 230 235 240

Ala Lys Ser Lys Glu Thr Gln Glu Ala Glu Leu Arg Met Leu Arg Lys  
245 250 255

Ser Leu Asn Phe Lys Ala Thr Pro Met Pro Ser Phe Tyr Gln Glu Pro  
260 265 270

Gln Pro Pro Lys Thr Glu Leu Lys Lys Ile Pro Pro Thr Arg Pro Lys  
275 280 285

Ser Pro Lys Leu Gly Arg Lys Lys Thr Ala Ser Gly Ala Asp Ser Glu  
290 295 300

Glu Thr Gln Thr Pro Arg Leu Gly Arg Leu Ser Leu Asp Glu Arg Ala  
305 310 315 320

Ser Lys Asp Asn Pro Thr Ala Lys Gly Ile Met Pro Thr Val Asp Leu  
325 330 335

Lys Lys Gln Pro Val Arg Lys Ser Leu Pro Arg Leu Pro Ser Gln Lys  
340 345 350

Thr Val Leu Pro Asp Gly Lys Pro Ala Pro Ala Lys Ala Ala Ile Ile  
355 360 365

047-E2F-PCT.ST25.txt

Pro Ala Lys Val Arg Pro Glu Lys Lys Lys Leu Glu Lys Asp Ala Glu  
370 375 380

Thr Val Asn Gln Thr Ser His Pro Thr Glu Glu Glu Ala Gln Val Thr  
385 390 395 400

Val Ser Ser Asn Ala Asp Val Glu Asp Ser His Glu Thr Val Ser Pro  
405 410 415

Arg Met Asn Glu Asp Arg Ala Asp Lys Ser Ile Glu Val Ser Glu Ala  
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Val Ala Val Glu His  
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<210> 1427

<211> 441

<212> DNA

<213> Arabidopsis thaliana

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<210> 1428

<211> 146

<212> PRT

<213> Arabidopsis thaliana

<400> 1428

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Page 2221

047-EEF-PCF.S123.txt

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Leu Gly Val Thr<sub>20</sub> Pro Arg Thr Ser Phe<sub>25</sub> Arg Arg Phe Val Ile<sub>30</sub> Arg Ala

Lys Thr Glu<sub>35</sub> Pro Ser Glu Lys Ser<sub>40</sub> Val Glu Ile Met<sub>45</sub> Arg Lys Phe Ser

Glu Gln Tyr Ala Arg Arg Ser<sub>55</sub> Gly Thr Tyr Phe Cys<sub>60</sub> Val Asp Lys Gly

Val Thr Ser Val Val Ile<sub>70</sub> Lys Gly Leu Ala Glu<sub>75</sub> His Lys Asp Ser Tyr<sub>80</sub>

Gly Ala Pro Leu Cys<sub>85</sub> Pro Cys Arg His Tyr<sub>90</sub> Asp Asp Lys Ala Ala<sub>95</sub> Glu

Val Gly Gln Gly<sub>100</sub> Phe Trp Asn Cys Pro<sub>105</sub> Cys Val Pro Met<sub>110</sub> Arg Glu Arg

Lys Glu Cys<sub>115</sub> His Cys Met Leu Phe<sub>120</sub> Leu Thr Pro Asp Asn<sub>125</sub> Asp Phe Ala

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<210> 1429

<211> 255

<212> DNA

<213> Arabidopsis thaliana

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<210> 1430

&lt;211&gt; 84

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1430

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20 25 30Gln Leu Ser Arg Tyr Glu Asn Gln Lys Arg Arg Asp Trp Asn Thr Phe  
35 40 45Gly Gln Tyr Leu Arg Asn His Arg Pro Pro Leu Ser Leu Ser Arg Cys  
50 55 60Ser Gly Ala His Val Leu Glu Phe Leu Arg Tyr Leu Asp Gln Phe Gly  
65 70 75 80

Lys Thr Lys Val

&lt;210&gt; 1431

&lt;211&gt; 2268

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1431

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gcagtgaatt atccagcgaa taaacttgct tgttatgtat cggatgatgg atgtcacct 420

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aaaaaatata acattaaagt tagagctcct tttagatatt ttttgaacc tccagccgca 540

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&lt;210&gt; 1432

&lt;211&gt; 755

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1432

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Leu Phe Ser Leu Leu Leu Tyr Arg Ile Leu Leu Met Asn Gln Asn Asn  
 35 40 45

Ser Val Trp Val Val Ala Phe Leu Cys Glu Ser Phe Phe Ser Phe Ile  
 50 55 60

Trp Leu Leu Ile Thr Ser Ile Lys Trp Ser Pro Ala Ser Tyr Lys Ser  
 65 70 75 80

Tyr Pro Glu Arg Leu Asp Glu Arg Val His Asp Leu Pro Ser Val Asp  
 85 90 95

Met Phe Val Thr Thr Ala Asp Pro Val Arg Glu Pro Pro Ile Leu Val  
 100 105 110

Ala Asn Thr Leu Leu Ser Leu Leu Ala Val Asn Tyr Pro Ala Asn Lys  
 115 120 125

Leu Ala Cys Tyr Val Ser Asp Asp Gly Cys Ser Pro Leu Thr Tyr Phe  
 130 135 140

Ser Leu Lys Glu Ala Ser Lys Phe Ala Lys Ile Trp Val Pro Phe Cys  
 145 150 155 160

Lys Lys Tyr Asn Ile Lys Val Arg Ala Pro Phe Arg Tyr Phe Leu Asn  
 165 170 175

Pro Pro Ala Ala Thr Glu Ser Ser Glu Phe Ser Lys Asp Trp Glu Ile  
 180 185 190

Thr Lys Arg Glu Tyr Glu Lys Leu Ser Arg Arg Val Glu Asp Ala Thr  
 195 200 205

Gly Asp Ser His Trp Leu Asp Ala Glu Asp Asp Phe Glu Asp Phe Ser  
 210 215 220

047-E2F-PCT.ST25.txt

Asn Thr Lys Pro Asn Asp His Ser Thr Ile Val Lys Val Val Trp Glu  
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 245 250 255  
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 260 265 270  
 Ala Met Asn Phe Leu Val Arg Val Ser Gly Leu Met Thr Asn Ala Pro  
 275 280 285  
 Tyr Met Leu Asn Val Asp Cys Asp Met Tyr Ala Asn Glu Ala Asp Val  
 290 295 300  
 Val Arg Gln Ala Met Cys Ile Phe Leu Gln Lys Ser Met Asn Ser Asn  
 305 310 315 320  
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 Asp Glu Leu Thr Val Leu Gln Ser Tyr Leu Gly Arg Gly Ile Ala Gly  
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 Ile Gln Gly Pro Thr Tyr Ala Gly Ser Gly Cys Phe His Thr Arg Arg  
 355 360 365  
 Val Met Tyr Gly Leu Ser Ile Asp Asp Leu Glu Asp Asp Gly Ser Leu  
 370 375 380  
 Ser Ser Leu Ala Thr Arg Lys Tyr Leu Ala Glu Glu Asn Leu Ala Arg  
 385 390 395 400  
 Glu Phe Gly Asn Ser Asn Glu Met Val Thr Ser Val Val Glu Ala Leu  
 405 410 415  
 Gln Arg Lys Pro Asn Pro Gln Asn Thr Leu Ala Asn Ser Leu Glu Ala  
 420 425 430  
 Ala Gln Glu Val Gly His Cys His Phe Glu Tyr Gln Thr Ser Trp Gly  
 435 440 445  
 Lys Thr Ile Gly Trp Leu Tyr Glu Ser Thr Ala Glu Asp Ala Asn Thr  
 450 455 460  
 Ser Ile Gly Ile His Ser Arg Gly Trp Thr Ser Ser Tyr Ile Ser Pro  
 465 470 475 480



047-E2F-PCT.ST25.txt

Lys Pro Pro Ala Phe Leu Gly Ala Met Pro Pro Gly Gly Pro Glu Ala  
 485 490 495  
 Met Leu Gln Gln Arg Arg Trp Ala Thr Gly Leu Leu Glu Val Leu Phe  
 500 505 510  
 Asn Lys Gln Ser Pro Leu Ile Gly Met Phe Cys Arg Lys Ile Arg Phe  
 515 520 525  
 Arg Gln Ser Leu Ala Tyr Leu Tyr Ile Phe Thr Trp Gly Leu Arg Ser  
 530 535 540  
 Ile Pro Glu Leu Ile Tyr Cys Leu Leu Pro Ala Tyr Cys Leu Leu His  
 545 550 555 560  
 Asn Ala Ala Leu Phe Pro Lys Gly Val Tyr Leu Gly Ile Val Val Thr  
 565 570 575  
 Leu Val Gly Met His Cys Leu Tyr Ser Leu Trp Glu Phe Met Ser Leu  
 580 585 590  
 Gly Phe Ser Val Gln Ser Trp Phe Ala Ser Gln Ser Phe Trp Arg Ile  
 595 600 605  
 Lys Thr Thr Cys Ser Trp Leu Phe Ser Ile Pro Asp Ile Ile Leu Lys  
 610 615 620  
 Leu Leu Gly Ile Ser Lys Thr Val Phe Ile Val Thr Lys Lys Thr Met  
 625 630 635 640  
 Pro Lys Thr Met Ser Gly Ser Gly Ser Glu Lys Ser Gln Arg Glu Val  
 645 650 655  
 Asp Cys Pro Asn Gln Asp Ser Gly Lys Phe Glu Phe Asp Gly Ser Leu  
 660 665 670  
 Tyr Phe Leu Pro Gly Thr Phe Ile Leu Leu Val Asn Leu Ala Ala Leu  
 675 680 685  
 Ala Gly Cys Ser Val Gly Leu Gln Arg His Arg Gly Gly Gly Ser Gly  
 690 695 700  
 Leu Ala Glu Ala Cys Gly Cys Ile Leu Val Val Ile Leu Phe Leu Pro  
 705 710 715 720  
 Phe Leu Lys Gly Met Phe Glu Lys Gly Lys Tyr Gly Ile Pro Trp Ser

Thr Leu Ser Lys Ala Ala Phe Leu Ala Val Leu Phe Val Val Phe Ser  
 740 745 750

Val Gly Asn  
 755

<210> 1433

<211> 564

<212> DNA

<213> Arabidopsis thaliana

<400> 1433  
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 aagttgaacc ctgagaacta cgagaatgat tctgaactta gcaagattag agaagacagg 180  
 ggttacgatt acatggattt gctggatctg tgtcccaga aagtcagcaa ctacgaagaa 240  
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 gcaggaagtg gctactttga tgtagggac aaggatgac gttaggatcc tatctggatg 360  
 caacctggcg atctcattgt ccttcctgcc ggaatctacc accggttcac actcgacgcc 420  
 agcaactaca tcaagctaata gaggctgttc gtgggggaac cggtttgac accatataac 480  
 cggccacagg aagaacatcc tgtaggaaa aagtatatcc acggcttaac ctacaagttt 540  
 ggagaaaccg ttaagcaca ttaa 564

<210> 1434

<211> 187

<212> PRT

<213> Arabidopsis thaliana

<400> 1434

Met Ala Leu Glu Ala Trp Phe Met Asp Asp Ser Asn Glu Asp Gln Arg  
 1 5 10 15

Leu Pro His His Arg Asn Pro Lys Glu Leu Val Ser Leu Asp Tyr Leu  
 20 25 30

Ala Glu Leu Gly Val Leu Tyr Trp Lys Leu Asn Pro Glu Asn Tyr Glu  
 35 40 45

Asn Asp Ser Glu Leu Ser Lys Ile Arg Glu Asp Arg Gly Tyr Asp Tyr  
 50 55 60

Met Asp Leu Leu Asp Leu Cys Pro Glu Lys Val Ser Asn Tyr Glu Glu  
 65 70 75 80

Lys Leu Lys Asn Phe Phe Thr Glu His Ile His Lys Asp Glu Glu Ile  
 85 90 95

Arg Tyr Cys Leu Ala Gly Ser Gly Tyr Phe Asp Val Arg Asp Lys Asp  
 100 105 110

Asp Arg Trp Ile Arg Ile Trp Met Gln Pro Gly Asp Leu Ile Val Leu  
 115 120 125

Pro Ala Gly Ile Tyr His Arg Phe Thr Leu Asp Ala Ser Asn Tyr Ile  
 130 135 140

Lys Leu Met Arg Leu Phe Val Gly Glu Pro Val Trp Thr Pro Tyr Asn  
 145 150 155 160

Arg Pro Gln Glu Glu His Pro Val Arg Lys Lys Tyr Ile His Gly Leu  
 165 170 175

Thr Tyr Lys Phe Gly Glu Thr Val Lys Ala His  
 180 185

<210> 1435

<211> 699

<212> DNA

<213> Arabidopsis thaliana

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 gccgctatg ttaaggatgg tctgatcatt gtgattggag gttgcaggtc caagaatata 180  
 gagacttggg gagagattta tgatctaaag accaatactt gggggcgaat actgctccaa 240  
 tcacatgatc ccacagtcca aaatgcttac ttgaatcgct ttaaaccataa cttgcagacg 300  
 aatgcttgct atgtagagat tgacaagggtg tcgtgcctga tatttttatc cgatgggaag 360

ctattttggc gtgaaacaaa gcaaggtttt gagaggtgta gtgttatatt gggagatgat 420  
 gagcaagtgt cctcttatca acttgtttcg gtggcaaacg ccgccggagg aggaagagtg 480  
 acagtttggg ggaagtcggg gttaaaagtt ctggatctct taagtggcac tgagacttgg 540  
 gaatgttaca caaatattcg gtgtgcagag atttcgtttg agagaagagg tttaagagag 600  
 ctttggggat tcgttgaatg gtctagagag gtgtttaccg ttgatggata tgacgatact 660  
 tacgatttct ttttaaattc tgctattgtg acctattga 699

<210> 1436

<211> 232

<212> PRT

<213> Arabidopsis thaliana

<400> 1436

Met Thr Pro Lys Ser Arg Gly Phe Val Arg Arg Arg Arg Ser Arg Arg  
 1 5 10 15

Val Leu Val Leu Asp Cys Arg Ser Gln Gln Trp Arg Ser Leu Pro Lys  
 20 25 30

Met Arg Gln Pro Arg Ala Ser Pro Ala Ala Tyr Val Lys Asp Gly Leu  
 35 40 45

Ile Ile Val Ile Gly Gly Cys Arg Ser Lys Asn Ile Glu Thr Trp Gly  
 50 55 60

Glu Ile Tyr Asp Leu Lys Thr Asn Thr Trp Gly Arg Ile Leu Leu Gln  
 65 70 75 80

Ser His Asp Pro Thr Val Gln Asn Ala Tyr Leu Asn Arg Phe Lys Pro  
 85 90 95

Asn Leu Gln Thr Asn Ala Cys Tyr Val Glu Ile Asp Lys Val Ser Cys  
 100 105 110

Leu Ile Phe Leu Ser Asp Gly Lys Leu Phe Trp Arg Glu Thr Lys Gln  
 115 120 125

Gly Phe Glu Arg Cys Ser Val Ile Leu Gly Asp Asp Glu Gln Val Ser  
 130 135 140

Ser Tyr Gln Leu Val Ser Val Ala Asn Ala Ala Gly Gly Gly Arg Val  
 145 150 155 160

Thr Val Trp Trp Lys Ser Gly Leu Lys Val Leu Asp Leu Leu Ser Gly  
165 170 175

Thr Glu Thr Trp Glu Cys Tyr Thr Asn Ile Arg Cys Ala Glu Ile Ser  
180 185 190

Phe Glu Arg Arg Gly Leu Arg Glu Leu Trp Gly Phe Val Glu Trp Ser  
195 200 205

Arg Glu Val Phe Thr Val Asp Gly Tyr Asp Asp Thr Tyr Asp Phe Phe  
210 215 220

Leu Asn Ser Ala Ile Val Thr Tyr  
225 230

<210> 1437

<211> 1068

<212> DNA

<213> Arabidopsis thaliana

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tcagctcacg cctcttcagc ctccgtctcc gttgagacaa attcgaattc gaatgtggat 180  
tttgttatcg agaagaagga taagaacaga ggagagaaga agattctagc ttgtcccatc 240  
tgttataact ccttagcatg gattagtcaa cctaattgat taatagaatc tgctgcctct 300  
ggtattcaag tacaatgcaa tacatgtaaa aggagtact cgggtaatga gacgcattct 360  
gatttggtcg ttgctagtgg aagcaagaga tacagtgaac cgatgcctct ttccactgag 420  
ttatttagga ctccactggt ctcgtttctc tatgagaggg gttggcgta gaatttcata 480  
tggggaggtt ttccaggacc agagaaagag ttgaaatgg ctaaggccta tctgaagcct 540  
gttttgagg gcaatatcat tgatgctagt tgtggaagtg ggaatttctc gaggttattc 600  
actagaagtg atctattttc tctggttatt gctctagatt actcagagaa tatgtgcga 660  
caatgctatg aactcttaaa taaagaagaa aactttccca acaaagagaa acttgttcta 720  
gtccgagctg acattgctag actcccttc cttcggtt cagttgacgc tgccatgct 780  
gggtgtgctc tgcattgctg gccttcacca tctcagccg ttgctgagat aagcgtgtt 840  
cttagacctg gaggagtatt tgtggccacc acatttatct atgacggtcc attcagtttt 900

atcccccttct tgaagaatct tcgtcaggaa ataatgagat attcagggttc tcacattttc 960  
 ctaaatagaac gtgagcttga agatatctgc aaagcctgtg gtctcgtaa cttcactcgt 1020  
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<210> 1438

<211> 355

<212> PRT

<213> Arabidopsis thaliana

<400> 1438

Met Pro Met Thr Val Val Ser Gly Arg Phe Ser Thr Ala Leu Leu Pro  
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Thr Cys Phe Ser Leu Ser Arg Leu His Ser Val Lys Tyr Ala Ala Gln  
 20 25 30

Arg Arg Val Val Phe Val Ser Arg Ser Ala His Ala Ser Ser Ala Ser  
 35 40 45

Val Ser Val Glu Thr Asn Ser Asn Ser Asn Val Asp Phe Val Ile Glu  
 50 55 60

Lys Lys Asp Lys Asn Arg Gly Glu Lys Lys Ile Leu Ala Cys Pro Ile  
 65 70 75 80

Cys Tyr Asn Ser Leu Ala Trp Ile Ser Gln Pro Asn Gly Leu Ile Glu  
 85 90 95

Ser Ala Ala Ser Gly Ile Gln Val Gln Cys Asn Thr Cys Lys Arg Ser  
 100 105 110

Tyr Ser Gly Asn Glu Thr His Leu Asp Leu Ala Val Ala Ser Gly Ser  
 115 120 125

Lys Arg Tyr Ser Glu Pro Met Pro Leu Ser Thr Glu Leu Phe Arg Thr  
 130 135 140

Pro Leu Val Ser Phe Leu Tyr Glu Arg Gly Trp Arg Gln Asn Phe Ile  
 145 150 155 160

Trp Gly Gly Phe Pro Gly Pro Glu Lys Glu Phe Glu Met Ala Lys Ala  
 165 170 175

Tyr Leu Lys Pro Val Leu Gly Gly Asn Ile Ile Asp Ala Ser Cys Gly  
 180 185 190

Ser Gly Met Phe Ser Arg Leu Phe Thr Arg Ser Asp Leu Phe Ser Leu  
 195 200 205

Val Ile Ala Leu Asp Tyr Ser Glu Asn Met Leu Arg Gln Cys Tyr Glu  
 210 215 220

Leu Leu Asn Lys Glu Glu Asn Phe Pro Asn Lys Glu Lys Leu Val Leu  
 225 230 235 240

Val Arg Ala Asp Ile Ala Arg Leu Pro Phe Leu Ser Gly Ser Val Asp  
 245 250 255

Ala Val His Ala Gly Ala Ala Leu His Cys Trp Pro Ser Pro Ser Ser  
 260 265 270

Ala Val Ala Glu Ile Ser Arg Val Leu Arg Pro Gly Gly Val Phe Val  
 275 280 285

Ala Thr Thr Phe Ile Tyr Asp Gly Pro Phe Ser Phe Ile Pro Phe Leu  
 290 295 300

Lys Asn Leu Arg Gln Glu Ile Met Arg Tyr Ser Gly Ser His Ile Phe  
 305 310 315 320

Leu Asn Glu Arg Glu Leu Glu Asp Ile Cys Lys Ala Cys Gly Leu Val  
 325 330 335

Asn Phe Thr Arg Val Arg Asn Gly Pro Phe Ile Met Leu Ser Ala Thr  
 340 345 350

Lys Pro Ser  
 355

<210> 1439

<211> 963

<212> DNA

<213> Arabidopsis thaliana

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 atacttcctt tggtagttgc ttcaatacct agttcaaagc ttaactcttt tcgtgaactc 120

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gttttgagtt tcgctggtag aggcgaagatt cttcacccat cctctcagaa gtttacagtt 180
cctcagaagt tcttttggtca cttctatggt gtcggagtgg tgtggacaac tctcctgctt 240
gctgcaactt ggatgtatgc ttgcaaaatg gccggagggt cccacgtttt cttcttccat 300
atgactcatg ttgagcatcg gtttaaagtg gggcgagcgg tgtttctact tcttctgatg 360
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gctcggatgc acattctcgc ttatgttggc gcattgtttt actatgtatg agcgcccttg 480
tcactctgct ccaatatggc tccagaggta gcaagattcg taggaagtca agtggctgag 540
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ttgatgaagc ttggatcact ccagtggatt ggtggagcca ttttctttg gggatggata 660
catcaacgct gctgtcacgc cattcttggg tcaactccgg aatatcctag tcaagcaaaa 720
gagtacataa ttccatatgg agattgggtt gagatggctt catgtccgca tttcctagca 780
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taa

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&lt;210&gt; 1440

&lt;211&gt; 320

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1440

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Met Glu Val Glu Ile Val Trp Leu Val Lys Ala Ala Trp Ile Thr Val
1           5           10           15

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Trp Ile Val Ser Ile Leu Pro Leu Val Ile Ala Ser Ile Pro Ser Ser
20           25           30

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Lys Leu Asn Ser Phe Arg Glu Leu Val Leu Ser Phe Ala Gly Arg Gly
35           40           45

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Lys Ile Leu His Pro Ser Ser Gln Lys Phe Thr Val Pro Gln Lys Phe
50           55           60

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Phe Gly His Phe Tyr Val Val Gly Val Val Trp Thr Thr Leu Leu Leu
65           70           75           80

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Ala Ala Thr Trp Met Tyr Ala Cys Lys Met Ala Gly Gly Ser His Val  
85 90

Phe Ser Phe His Met Thr His Val Glu His Arg Phe Lys Val Gly Arg  
100 105 110

Ala Val Phe Leu Leu Leu Leu Met Glu Ile His Val Leu Arg Arg Val  
115 120 125

Ile Glu Ser Phe Tyr Val Phe Lys Tyr Ser Thr Ser Ala Arg Met His  
130 135 140

Ile Leu Ala Tyr Val Gly Ala Leu Phe Tyr Tyr Val Ala Ala Pro Leu  
145 150 155 160

Ser Leu Cys Ser Asn Ile Ala Pro Glu Val Ala Arg Phe Val Gly Ser  
165 170 175

Gln Val Ala Glu Phe Ile Ala Ser Gly Lys Ser His Ser His Asp Phe  
180 185 190

Asn Leu Leu Leu Ser Ile Ser Pro Leu Met Lys Leu Gly Ser Leu Gln  
195 200 205

Trp Ile Gly Gly Ala Ile Phe Leu Trp Gly Trp Ile His Gln Arg Arg  
210 215 220

Cys His Ala Ile Leu Gly Ser Leu Arg Glu Tyr Pro Ser Gln Ala Lys  
225 230 235 240

Glu Tyr Ile Ile Pro Tyr Gly Asp Trp Phe Glu Met Val Ser Cys Pro  
245 250 255

His Phe Leu Ala Glu Ile Val Leu Tyr Leu Gly Leu Leu Ile Ser Ser  
260 265 270

Gly Gly Thr Asp Ile Ser Ile Trp Leu Leu Phe Gly Phe Val Ala Ala  
275 280 285

Asn Leu Thr Tyr Ala Ala Gly Glu Thr His Arg Trp Tyr Leu Gln Lys  
290 295 300

Phe Glu Asn Tyr Pro Ala Ser Arg His Ala Ile Phe Pro His Val Tyr  
305 310 315 320

<210> 1441

<211> 1608

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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accaatcggt tggttacatc tttggtaaat gatgcaaagg caggagtggc tttgaatgtt    180
atgtgtggag gaggtctctt tggcacgaat tcaggggtcg atagtccatt agcttcaatg    240
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gccagacaaa gaactggact atcaaatctt agttctcttc tcaaagtagt ttctgatcat    360
gttaaagaac tcattcctca gttttacttt gaagatggtc ggcaccacc aaatgatcta    420
aaagagcagt gcatagctaa gatcaatagt cttttctatg gccacgagga tggtttgcaa    480
ctccaagaat ttaaattagt cactactgaa atatgcaaag ttccatcatt tttttccacc    540
tccattttca agaaagtga taccaataac actggttttg tgaaaagaga agacttcatt    600
gattattggg ttaaggggaaa tatgttaaca aaggagataa caagtcaagt atttacaata    660
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tatgctgaaa ctgtaatata cagaatatat tactacataa ataggagtgg aaatgggcat    840
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gaagaggaca tcaataaggt gttgaggtac ttctcgtagt aacatttcta tgtcatatac    960
tgcaagtctt gggagtgtga tacagatcat gattttctaa tcgacaaaga gaatctcatc   1020
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cgttttgctc atagagaata tattaggcta tcaatggaag aagatgtcga agatgcttct   1560
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&lt;210&gt; 1442

&lt;211&gt; 535

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1442

Met Glu Ser Ile Thr Leu Asp Ile Glu Leu Leu Gln Leu Pro Glu Thr  
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Ser Pro Met Ser Met Lys Ser Asn Gln Asp Phe Val Lys Lys Leu Phe  
 20 25 30

Asp Gln Trp Leu Ala Leu Pro Glu Thr Asn Arg Leu Val Thr Ser Leu  
 35 40 45

Val Asn Asp Ala Lys Ala Gly Val Ala Leu Asn Val Met Cys Gly Gly  
 50 55 60

Gly Ser Ser Gly Thr Asn Ser Gly Ser Asn Ser Pro Leu Ala Ser Met  
 65 70 75 80

Phe Pro Ala Arg Asn Gly Pro Pro Leu Ser Pro Arg Asn Ser Thr Gly  
 85 90 95

Ser Pro Arg Ile Ala Arg Gln Arg Thr Gly Leu Ser Asn Leu Ser Ser  
 100 105 110

Pro Leu Lys Val Val Ser Asp His Val Lys Glu Leu Ile Pro Gln Phe  
 115 120 125

Tyr Phe Glu Asp Gly Arg Pro Pro Asn Asp Leu Lys Glu Gln Cys  
 130 135 140

Ile Ala Lys Ile Asn Ser Leu Phe Tyr Gly His Glu Asp Gly Leu Gln  
 145 150 155 160

Leu Gln Glu Phe Lys Leu Val Thr Thr Glu Ile Cys Lys Val Pro Ser  
 165 170 175

Phe Phe Ser Thr Ser Ile Phe Lys Lys Val Asp Thr Asn Asn Thr Gly  
 180 185 190

Phe Val Lys Arg Glu Asp Phe Ile Asp Tyr Trp Val Lys Gly Asn Met  
 195 200 205

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Leu Thr Lys Glu Ile Thr Ser Gln Val Phe Thr Ile Leu Lys Gln Pro  
 210 215 220

Asp His Asn Tyr Leu Val Gln Asp Asp Phe Lys Pro Val Leu Gln Glu  
 225 230 235 240

Leu Leu Ala Thr His Pro Gly Leu Glu Phe Leu Gln Gly Thr Pro Glu  
 245 250 255

Phe Gln Asp Arg Tyr Ala Glu Thr Val Ile Tyr Arg Ile Tyr Tyr Tyr  
 260 265 270

Ile Asn Arg Ser Gly Asn Gly His Leu Thr Leu Arg Glu Leu Lys Arg  
 275 280 285

Gly Asn Leu Val Asp Ala Met Gln His Ala Asp Glu Glu Glu Asp Ile  
 290 295 300

Asn Lys Val Leu Arg Tyr Phe Ser Tyr Glu His Phe Tyr Val Ile Tyr  
 305 310 315 320

Cys Lys Phe Trp Glu Leu Asp Thr Asp His Asp Phe Leu Ile Asp Lys  
 325 330 335

Glu Asn Leu Ile Arg Tyr Ser Asn His Ala Leu Thr Tyr Arg Ile Val  
 340 345 350

Asp Arg Ile Phe Ser Gln Val Pro Arg Lys Phe Thr Ser Lys Thr Glu  
 355 360 365

Gly Lys Met Gly Tyr Glu Asp Phe Val Tyr Phe Ile Leu Ala Glu Glu  
 370 375 380

Asp Lys Ser Ser Glu Pro Ser Leu Glu Tyr Trp Phe Lys Cys Ile Asp  
 385 390 395 400

Leu Asp Ala Asn Gly Val Leu Thr Arg Asn Glu Leu Gln Phe Phe Tyr  
 405 410 415

Glu Glu Gln Leu His Arg Met Glu Cys Met Ala Gln Glu Ala Val Leu  
 420 425 430

Phe Glu Asp Ile Leu Cys Gln Leu Phe Asp Met Val Lys Pro Glu Asp  
 435 440 445

Glu Gly Phe Ile Cys Leu Asn Asp Leu Lys Gly Ser Lys Leu Ser Gly  
 450 455 460

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Asn Val Phe Asn Ile Leu Phe Asn Leu Asn Lys Phe Met Ala Phe Glu  
465 470 475 480

Thr Arg Asp Pro Phe Leu Ile Arg Gln Glu Arg Ala Asn Pro Thr Trp  
485 490 495

Thr Glu Trp Asp Arg Phe Ala His Arg Glu Tyr Ile Arg Leu Ser Met  
500 505 510

Glu Glu Asp Val Glu Asp Ala Ser Asn Gly Ser Ala Glu Ala Trp Asp  
515 520 525

Asp Ser Leu Glu Val Pro Phe  
530 535

<210> 1443

<211> 2265

<212> DNA

<213> Arabidopsis thaliana

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actacgcagc cttaccttcc tacagcacct atggtttacg ccgttatacc cgaccggga 180  
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tgtgattgcc gaattgctat tcccatggga gaacagggat caatactagg tgttgaggtt 420  
gagattccta gaaaatcgta cacaacgcag ttgatcacag cagaagatgg aaacgaattt 480  
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ataccacagg ttgatggagg taccaatctc tctatcaaga tgacttggtc tcagaagtgg 600  
acgtataacc aagggcagtt ttttcttgat attcctttca actttcctga gtatgtgact 660  
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ggaaaacctc tcgaggatgt aaaaaatgcg atatctacag ctctatctaa gcttgatect      1080
ggagattcct tcaatattat cactttcagc aatgatactg ctctattttc gacatcaatg      1140
gagtcagtca cttctgatgc tgttgaaaga ggcattgagt ggatgaacaa gaactttgtc      1200
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ctagatgaag ttgagggtata cccttcaaat attccggatc tgacgtctgc aagtccattg      1620
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gataaacagc taaaagagaa gattgctaaa ctaagcatcc aaaccggcgt actatccgag      1860
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aagaaaaaga caacaagcaa cggcgagaaa cagaagatga tatcaagaac gatcccgcct      1980
caaagccttg ggataggatt tggggataaa acagccacca gagagaatgt tccgccagga      2040
tttggcgagc agaaagcttc tgatgctgct gagaagttcg tcaaggctgc ttcgagctgt      2100
tgtgtctcct tgtgcaacaa atgttgctgc atgtgttgtg tccaatgctg ctctaagctc      2160
aatgatcaat gtgtccttgt cttcacacag ctcttcacag cgattgcttg catcgctgct      2220
tttgaatggt gctcaactgt ttgctgttct ggagacgatg ggtag                        2265

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<210> 1444

<211> 754

<212> PRT

<213> Arabidopsis thaliana

<400> 1444

Met Ala Glu Asp Phe Ala Arg Ala Val Asp Asp Gly Leu Lys Leu Ala  
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 Pro Ala Pro Met Asp Arg Ser Ser Thr Thr Gln Pro Tyr Leu Pro Thr  
 35 40 45  
 Ala Pro Met Val Tyr Ala Val Ile Pro Asp Pro Gly Ile Val Asp Asn  
 50 55 60  
 Pro Asp Leu Pro Ser Tyr Gln Pro His Val His Gly Arg Cys Asp Pro  
 65 70 75 80  
 Pro Ala Leu Ile Pro Leu Gln Met Asn Ser Ile Glu Leu Asp Val Asp  
 85 90 95  
 Cys Tyr Leu Asp Thr Ala Leu Val Thr Val Thr Gly Ser Trp Arg Val  
 100 105 110  
 His Cys Val Met Gly Ser Lys Arg Cys Asp Cys Arg Ile Ala Ile Pro  
 115 120 125  
 Met Gly Glu Gln Gly Ser Ile Leu Gly Val Glu Val Glu Ile Pro Arg  
 130 135 140  
 Lys Ser Tyr Thr Thr Gln Leu Ile Thr Ala Glu Asp Gly Asn Glu Phe  
 145 150 155 160  
 Glu Lys Thr Ala Leu Pro Glu Thr Gly Gly Phe Leu Lys Pro Asn Ile  
 165 170 175  
 Phe Thr Leu Thr Ile Pro Gln Val Asp Gly Gly Thr Asn Leu Ser Ile  
 180 185 190  
 Lys Met Thr Trp Ser Gln Lys Leu Thr Tyr Asn Gln Gly Gln Phe Phe  
 195 200 205  
 Leu Asp Ile Pro Phe Asn Phe Pro Glu Tyr Val Thr Pro Ala Val Lys  
 210 215 220  
 Lys Ile Ser Lys Arg Glu Lys Ile Tyr Leu Ser Val Asn Ala Gly Thr  
 225 230 235 240  
 Gly Thr Glu Val Leu Cys Lys Gly Cys Ser His Gln Leu Lys Glu Lys  
 245 250 255  
 Leu Arg Ser Ala Gly Lys Leu Arg Phe Ala Tyr Glu Ala Asp Val Leu  
 260 265 270

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Lys Trp Ser Asn Thr Asp Phe Ser Phe Ser Tyr Thr Ala Ser Ser Ser  
 275 280 285  
 Asn Ile Val Gly Gly Leu Phe Leu Gln Ser Ala Pro Val His Asp Val  
 290 295 300  
 Asp Gln Arg Asp Ile Phe Ser Phe Tyr Leu Phe Pro Gly Lys Gln Gln  
 305 310 315 320  
 Lys Thr Lys Ala Phe Lys Arg Glu Val Val Phe Val Val Asp Ile Ser  
 325 330 335  
 Lys Ser Met Thr Gly Lys Pro Leu Glu Asp Val Lys Asn Ala Ile Ser  
 340 345 350  
 Thr Ala Leu Ser Lys Leu Asp Pro Gly Asp Ser Phe Asn Ile Ile Thr  
 355 360 365  
 Phe Ser Asn Asp Thr Ala Leu Phe Ser Thr Ser Met Glu Ser Val Thr  
 370 375 380  
 Ser Asp Ala Val Glu Arg Gly Ile Glu Trp Met Asn Lys Asn Phe Val  
 385 390 395 400  
 Val Ala Asp Gly Thr Asn Met Leu Pro Pro Leu Glu Lys Ala Val Glu  
 405 410 415  
 Met Leu Ser Asn Thr Arg Gly Ser Ile Pro Met Ile Phe Phe Val Thr  
 420 425 430  
 Asp Gly Ser Val Glu Asp Glu Arg His Ile Cys Asp Val Met Lys Lys  
 435 440 445  
 His Leu Ala Ser Ala Gly Ser Val Phe Pro Arg Ile His Thr Phe Gly  
 450 455 460  
 Leu Gly Val Phe Cys Asn His Tyr Phe Leu Gln Met Leu Ala Asn Ile  
 465 470 475 480  
 Ser Cys Gly Gln His Glu Ser Val Tyr Asn Thr Asp His Ile Glu Glu  
 485 490 495  
 Arg Met Asp Lys Leu Phe Thr Lys Ala Leu Ser Thr Ile Leu Val Asn  
 500 505 510  
 Ile Ala Ile Glu Pro Leu Gln Ser Leu Asp Glu Val Glu Val Tyr Pro  
 515 520 525



Ser Asn Ile Pro Asp Leu Thr Ser Ala Ser Pro Leu Met Ile Tyr Gly  
 530 535 540  
 Arg Tyr Arg Gly Lys Phe Pro Glu Asn Val Ile Ala Lys Gly Leu Leu  
 545 550 555 560  
 Gly Asp Leu Ser Ser Phe Ser Thr Asp Leu Thr Val Gln Ser Ala Lys  
 565 570 575  
 Asp Met Pro Leu Asp Lys Val Phe Ala Lys Asn Val Ile Asp Leu Leu  
 580 585 590  
 Thr Ala Glu Ala Trp Phe Ser Glu Asp Lys Gln Leu Lys Glu Lys Ile  
 595 600 605  
 Ala Lys Leu Ser Ile Gln Thr Gly Val Leu Ser Glu Tyr Thr Arg Met  
 610 615 620  
 Ile Gln Leu Glu Asn Thr Glu Glu Leu Lys Pro Ser Glu Thr Gly Gly  
 625 630 635 640  
 Lys Lys Lys Thr Thr Ser Asn Gly Glu Lys Gln Lys Met Ile Ser Arg  
 645 650 655  
 Thr Ile Pro Leu Gln Ser Leu Gly Ile Gly Phe Gly Asp Lys Thr Ala  
 660 665 670  
 Thr Arg Glu Asn Val Pro Pro Gly Phe Gly Glu Gln Lys Ala Pro Asp  
 675 680 685  
 Ala Ala Glu Lys Phe Val Lys Ala Ala Ser Ser Cys Val Ser Leu  
 690 695 700  
 Cys Asn Lys Cys Cys Cys Met Cys Cys Val Gln Cys Cys Ser Lys Leu  
 705 710 715 720  
 Asn Asp Gln Cys Val Leu Val Phe Thr Gln Leu Phe Thr Ala Ile Ala  
 725 730 735  
 Cys Ile Ala Cys Phe Glu Cys Cys Ser Thr Val Cys Cys Ser Gly Asp  
 740 745 750  
 Asp Gly

&lt;211&gt; 1578

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1445

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gatgacggtg gcggtcccggt tcctggacct ccggcgcgca ttgataagaa atacgccgac	180
gctcttaagc tcgctttgca gttcttcgat atccagaaat ctggtaaatt ggagaacaat	240
aagatacctt ggagaggaga ttcaggtcct aaagatggaa gtgaagataa tctggatctt	300
tccaaaggct tatatgatgc tggagatcat ataaagtgtg gttttccaat ggctttcact	360
gctacagttt tgctatgggc gattcttgag tatggtgac aaatgaatgc agtgaaccaa	420
ttggatcctg ctaaagactc tctccggtgg atcactgact atcttatcaa agctcatcct	480
tctgacaatg tctctatat ccagggtgga gatccaaaag tagatcatcc atgtcgggag	540
agaccagagg atatgaaaga gaagagacca ctactaaaa ttgatgtaga tactccaggg	600
acagagggtg ctgctgaaac tgctgcagct atggcttcag cgcttttggg gtttaaggat	660
agtgtaccta catattcagc aacgcttctg aaacatgcga agcagttgtt taattttgca	720
gatacaaaga gaggctctta cagtgttaac atacctgagg ttcagaagtt ttacaattcg	780
actggatatg gtgatgagct actatgggca gctagtggg tgtatcatgc aacagaggat	840
aaaacttacc ttgattatgt gtctaatacat ggaaaagaat ttgctagttt tggaaatcct	900
acttggttta gttgggacaa caagcttgca ggaacacagg tactattatc aagattactc	960
ttctttaaga aagatttatc aggaagcaag ggacttgaa attacaggaa cacagctaaa	1020
gctgtcatgt gtggacttct accaaagtct ccaacatcta cagctagtag aacaacggt	1080
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gcctcgcttt tcagtgatta catgctcact tcccgatatc ataaaatatc ttgcgacggg	1200
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gtgcatcata gaggagcttc gatcccggca gatgcaacaa cgggttgctt agatggattc	1380
aatggttta actcgacgaa accaaacca aacatagcat atggtgcact cgtaggtgga	1440
cctttcttca atgagacgtt cactgactca cgagagaacc caatgcagaa cgagccaacc	1500
acttacaaca atgcactcct cggtggtctc ttgtctagtc ttgtcactac atcttctact	1560
ttacagtcgt tgaagtga	1578

&lt;210&gt; 1446

&lt;211&gt; 525

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1446

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20 25 30Leu Arg Thr Lys Lys Ser Gly Asp Asp Asp Gly Gly Gly Pro Val Pro  
35 40 45Gly Pro Pro Gly Ala Ile Asp Lys Lys Tyr Ala Asp Ala Leu Lys Leu  
50 55 60Ala Leu Gln Phe Phe Asp Ile Gln Lys Ser Gly Lys Leu Glu Asn Asn  
65 70 75 80Lys Ile Pro Trp Arg Gly Asp Ser Gly Leu Lys Asp Gly Ser Glu Asp  
85 90 95Asn Leu Asp Leu Ser Lys Gly Leu Tyr Asp Ala Gly Asp His Ile Lys  
100 105 110Phe Gly Phe Pro Met Ala Phe Thr Ala Thr Val Leu Ser Trp Ser Ile  
115 120 125Leu Glu Tyr Gly Asp Gln Met Asn Ala Val Asn Gln Leu Asp Pro Ala  
130 135 140Lys Asp Ser Leu Arg Trp Ile Thr Asp Tyr Leu Ile Lys Ala His Pro  
145 150 155 160Ser Asp Asn Val Leu Tyr Ile Gln Val Gly Asp Pro Lys Val Asp His  
165 170 175Pro Cys Trp Glu Arg Pro Glu Asp Met Lys Glu Lys Arg Pro Leu Thr  
180 185 190Lys Ile Asp Val Asp Thr Pro Gly Thr Glu Val Ala Ala Glu Thr Ala  
200 205 210 215 220 225 230 235 240 245

195  
 200 047-E2F-PCT.ST25.txt  
 205

Ala Ala Met Ala Ser Ala Ser Leu Val Phe Lys Asp Ser Asp Pro Thr  
 210 215

Tyr Ser Ala Thr Leu Leu Lys His Ala Lys Gln Leu Phe Asn Phe Ala  
 225 230 235

Asp Thr Lys Arg Gly Ser Tyr Ser Val Asn Ile Pro Glu Val Gln Lys  
 245 250 255

Phe Tyr Asn Ser Thr Gly Tyr Gly Asp Glu Leu Leu Trp Ala Ala Ser  
 260 265 270

Trp Leu Tyr His Ala Thr Glu Asp Lys Thr Tyr Leu Asp Tyr Val Ser  
 275 280 285

Asn His Gly Lys Glu Phe Ala Ser Phe Gly Asn Pro Thr Trp Phe Ser  
 290 295 300

Trp Asp Asn Lys Leu Ala Gly Thr Gln Val Leu Leu Ser Arg Leu Leu  
 305 310 315 320

Phe Phe Lys Lys Asp Leu Ser Gly Ser Lys Gly Leu Gly Asn Tyr Arg  
 325 330 335

Asn Thr Ala Lys Ala Val Met Cys Gly Leu Leu Pro Lys Ser Pro Thr  
 340 345 350

Ser Thr Ala Ser Arg Thr Asn Gly Gly Leu Ile Trp Val Ser Glu Trp  
 355 360 365

Asn Ser Met Gln Gln Ser Val Ser Ser Ala Phe Leu Ala Ser Leu Phe  
 370 375 380

Ser Asp Tyr Met Leu Thr Ser Arg Ile His Lys Ile Ser Cys Asp Gly  
 385 390 395 400

Lys Ile Phe Lys Ala Thr Glu Leu Arg Asp Phe Ala Lys Ser Gln Ala  
 405 410 415

Asp Tyr Met Leu Gly Lys Asn Pro Leu Gly Thr Ser Phe Val Val Gly  
 420 425 430

Tyr Gly Asp Lys Tyr Pro Gln Phe Val His His Arg Gly Ala Ser Ile  
 435 440 445

Pro Ala Asp Ala Thr Thr Gly Cys Leu Asp Gly Phe Lys Trp Phe Asn  
 450 455 460

Ser Thr Lys Pro Asn Pro Asn Ile Ala Tyr Gly Ala Leu Val Gly Gly  
 465 470 475 480

Pro Phe Phe Asn Glu Thr Phe Thr Asp Ser Arg Glu Asn Pro Met Gln  
 485 490 495

Asn Glu Pro Thr Thr Tyr Asn Asn Ala Leu Leu Val Gly Leu Leu Ser  
 500 505 510

Ser Leu Val Thr Thr Ser Ser Thr Leu Gln Ser Leu Lys  
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<210> 1447

<211> 2100

<212> DNA

<213> Arabidopsis thaliana

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 tctcaacatc ctgcacctgt tctcaaagat ttctcgagga tgctcgatac tcagattgag 180  
 acaactgtcc ttttcatgtt ggaacaacaa gggttgcttt cagggcgatt agccaaattg 240  
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 gaagcatata gagatgttgc acgagacctt cttcagctcc tgaaattcgt tgagttgaac 360  
 gccattggct tgcgcaagat acttaagaaa ttcgacaaaa ggtttgata tagattcgct 420  
 gattattacg tgaagaccgg cgctaatac ccttactctc agcttcaaca agtttttaag 480  
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 ttggcacaac atgctcttat catgcaagat gatttggtga ctcttcaga ggatacaatc 720  
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gcactcttta tcggaaattt gatgtatgcg ttggcatatg atgccaattc catagcgctt 1020  
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ggtgtgaatc tatcgttgtt atcgcggtg atgtcatcaa ggcatcgaa aggaacgtac 1920  
aacggaggat tgctctcaac agaagctgga acgttggctc gtgtgtggc agatgcaacc 1980  
ataacattgg gaggataattt ggggaaggc catctcctga atgccactct tctaccatca 2040  
cttgtcatct gcattggctc catcgttgct acttgttgta cttataactc actctattga 2100

&lt;210&gt; 1448

&lt;211&gt; 699

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1448

Met Val Ala Phe Gly Lys Tyr Leu Gln Arg Lys Gln Ile Glu Glu Trp  
1 5 10 15

Ser Gly Tyr Tyr Ile Asn Tyr Lys Leu Met Lys Lys Lys Val Lys Gln  
20 25 30

Tyr Ala Glu Gln Ile Gln Gly Gly Ser Gln His Pro Arg His Val Leu  
35 40 45

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Lys Asp Phe Ser Arg Met Leu Asp Thr Gln Ile Glu Thr Thr Val Leu  
 50 55 60  
 Phe Met Leu Glu Gln Gln Gly Leu Leu Ser Gly Arg Leu Ala Lys Leu  
 65 70 75 80  
 Arg Glu Ser His Asp Ala Ile Leu Glu Gln Pro Asp Ile Ser Arg Ile  
 85 90 95  
 Phe Glu Leu Arg Glu Ala Tyr Arg Asp Val Gly Arg Asp Leu Leu Gln  
 100 105 110  
 Leu Leu Lys Phe Val Glu Leu Asn Ala Ile Gly Leu Arg Lys Ile Leu  
 115 120 125  
 Lys Lys Phe Asp Lys Arg Phe Gly Tyr Arg Phe Ala Asp Tyr Tyr Val  
 130 135 140  
 Lys Thr Arg Ala Asn His Pro Tyr Ser Gln Leu Gln Gln Val Phe Lys  
 145 150 155 160  
 His Val Gly Val Gly Ala Val Val Gly Ala Ile Ser Arg Asn Leu His  
 165 170 175  
 Glu Leu Gln Glu Asn Glu Gly Ser Phe Tyr Ser Ile Tyr Asp Gln Pro  
 180 185 190  
 Val Leu Pro Ala Gln Asp Pro Val Val Glu Ala Ile Asn Asn Ala Val  
 195 200 205  
 Asp Lys Leu Thr Phe Ser Thr Asn Phe Leu Asn Phe Leu Ala Gln His  
 210 215 220  
 Ala Leu Ile Met Gln Asp Asp Leu Val Thr Pro Ser Glu Asp Thr Ile  
 225 230 235 240  
 Asp Glu Arg Ser Tyr His Phe Asn Ser Leu Leu Leu Asn Leu Gly Asn  
 245 250 255  
 Thr Phe Leu Tyr Met Val Asn Thr Tyr Ile Ile Val Pro Thr Ala Asp  
 260 265 270  
 Asp Tyr Ser Met Ser Leu Gly Ala Ala Ala Thr Val Cys Gly Val Val  
 275 280 285  
 Ile Gly Ser Met Ala Val Ala Gln Val Phe Ser Ser Val Tyr Phe Ser  
 290 295 300

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Ala Trp Ser Asn Lys Ser Tyr Phe Lys Pro Leu Val Phe Ser Ser Ile  
305 310 315 320

Ala Leu Phe Ile Gly Asn Leu Met Tyr Ala Leu Ala Tyr Asp Ala Asn  
325 330 335

Ser Ile Ala Leu Leu Leu Gly Arg Val Cys Cys Gly Leu Gly Ser  
340 345 350

Ala Arg Ala Val Asn Arg Arg Tyr Ile Ser Asp Cys Val Pro Leu Arg  
355 360 365

Ile Arg Met Gln Ala Ser Ala Gly Phe Val Ser Ala Ser Ala Leu Gly  
370 375 380

Met Ala Cys Gly Pro Ala Leu Ala Gly Leu Leu Gln Ile Lys Phe Lys  
385 390 395 400

Phe Tyr Lys Phe Thr Phe Asn Gln Ser Thr Leu Pro Gly Trp Val Met  
405 410 415

Ala Val Ala Trp Leu Phe Tyr Leu Val Trp Leu Cys Ile Ser Phe Arg  
420 425 430

Glu Pro Leu Arg Asp Thr Glu Asp Gly Glu Lys Asn Asn Arg Asn Glu  
435 440 445

Thr Thr Ser Ala Thr Asp Arg Val Glu Ser Ser Arg Val Glu Glu Gly  
450 455 460

Leu Arg Leu Pro Leu Leu Ile Thr Ser Gly Ile Lys Pro Glu Asp Glu  
465 470 475 480

Glu Glu Cys Asp Glu Ser Glu Glu Ser Pro Glu Asp Ser His Lys Pro  
485 490 495

Ala Asn Ser Phe Ile Glu Ala Tyr Arg Leu Leu Thr Pro Ser Val Lys  
500 505 510

Val Gln Leu Leu Ile Tyr Phe Met Leu Lys Tyr Ser Met Glu Ile Leu  
515 520 525

Leu Ser Glu Ser Ser Val Ile Thr Ser Tyr Tyr Phe Ser Trp Thr Thr  
530 535 540

Ser Ser Val Ala Ile Phe Leu Ala Cys Leu Gly Leu Thr Val Leu Pro  
545 550 555 560



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Ile Asn Ile Leu Val Gly Ser Tyr Ile Ser Asn Met Phe Glu Asp Arg  
565 570 575  
Gln Ile Leu Leu Thr Ser Glu Ile Ile Val Phe Leu Gly Ile Leu Phe  
580 585 590  
Ser Phe Asn Leu Phe Val Pro Tyr Thr Val Pro Gln Tyr Val Ile Ser  
595 600 605  
Gly Leu Ile Met Phe Val Ala Ala Glu Val Leu Glu Gly Val Asn Leu  
610 615 620  
Ser Leu Leu Ser Arg Val Met Ser Ser Arg Leu Ser Lys Gly Thr Tyr  
625 630 635 640  
Asn Gly Gly Leu Leu Ser Thr Glu Ala Gly Thr Leu Ala Arg Val Val  
645 650 655  
Ala Asp Ala Thr Ile Thr Leu Gly Gly Tyr Leu Gly Arg Gly His Leu  
660 665 670  
Leu Asn Ala Thr Leu Leu Pro Ser Leu Val Ile Cys Ile Gly Ser Ile  
675 680 685  
Val Ala Thr Cys Cys Thr Tyr Asn Ser Leu Tyr  
690 695

<210> 1449

<211> 432

<212> DNA

<213> Arabidopsis thaliana

<400> 1449

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catactgttt tagagttcga tgcgcagaga aagcatgctt ttgtcaaagg gaagcatca	180
cgtttcaaaa cggaagcctt gtccgcaaag catcatccgt cgtttttggga ttgggaattc	240
ggacagtcgc tgtgggatcc ctacgagatt ctttcggtct ctaagaaact ggaacgcgaa	300
ctcactttag aagaacaaac ctctcttct tcagataatg atggcctcaa gaagatgaag	360
aagaagaaaa ctagagacag cagaaacagc cttaggagtt tgttcactcg ttcgtcttca	420

aagagattct aa

&lt;210&gt; 1450

&lt;211&gt; 143

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1450

Met Arg Lys Lys Arg Glu Ala Lys Asp Glu Asn Glu Glu Glu Glu Glu  
 1 5 10 15

Glu Lys Lys Lys Arg Leu Glu Leu Met Lys Ala Ala Ala Gln Ala Trp  
 20 25 30

Leu Ser His Ser Gln Thr Ser Lys His Thr Val Leu Glu Phe Asp Ala  
 35 40 45

Gln Arg Lys His Ala Phe Val Lys Gly Lys Ala Ser Arg Phe Lys Thr  
 50 55 60

Glu Ala Leu Ser Ala Lys His His Pro Ser Phe Leu Asp Trp Glu Phe  
 65 70 75 80

Gly Gln Ser Leu Trp Asp Pro Tyr Glu Ile Leu Ser Val Ser Lys Lys  
 85 90 95

Leu Glu Arg Glu Leu Thr Leu Glu Glu Gln Thr Phe Ser Ser Ser Asp  
 100 105 110

Asn Asp Gly Leu Lys Lys Met Lys Lys Lys Lys Thr Arg Asp Ser Arg  
 115 120 125

Asn Ser Leu Arg Ser Leu Phe Thr Arg Ser Ser Ser Lys Arg Phe  
 130 135 140

&lt;210&gt; 1451

&lt;211&gt; 771

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1451

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60

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gagaacgaat cttccacctt tacttatctt ctgccgacg tttctcatcc tgataaacct 120  
gctttgttga ttgatccggg ggacaagact gtggatagag acttgaaact gattgatgag 180  
ttaggactaa agcttatcta tgctatgaac actcatgttc atgctgatca tgtcactggg 240  
actggacttc ttaagacgaa gtcctccggg gtgaaatccg ttatttcgaa agcaagtggg 300  
tccaaagctg atttgtttct tgaacctggg gacaaagtat ctattgggtga tatataacct 360  
gaggttcctg ctacacctgg acacactgca ggatgtgtta catatgtgac tgggtgaagga 420  
gctgatcagc cccaaccaag aatggccttt accggggatg ctgtactcat ccgtggttgt 480  
gggaggactg actttcagga aggaagctca gatcaactct acgagtctgt acattcacag 540  
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gtaagtacag ttggagaaga gatgcaacac aaccgcgctc taactaaaga taaagaaaca 660  
ttcaaaacca ttatgtcaaa tctgaatctg tcgtatccga agatgattga tgttcagta 720  
ccagcaaata tgggtctgtgg gttacaagat gtgccttctc aagccaacta a 771

<210> 1452

<211> 256

<212> PRT

<213> Arabidopsis thaliana

<400> 1452

Met Gly Ser Ser Ser Ser Phe Ser Ser Ser Ser Lys Leu Leu Phe  
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Arg Gln Leu Phe Glu Asn Glu Ser Ser Thr Phe Thr Tyr Leu Leu Ala  
20 25 30

Asp Val Ser His Pro Asp Lys Pro Ala Leu Leu Ile Asp Pro Val Asp  
35 40 45

Lys Thr Val Asp Arg Asp Leu Lys Leu Ile Asp Glu Leu Gly Leu Lys  
50 55 60

Leu Ile Tyr Ala Met Asn Thr His Val His Ala Asp His Val Thr Gly  
65 70 75 80

Thr Gly Leu Leu Lys Thr Lys Leu Pro Gly Val Lys Ser Val Ile Ser  
85 90 95

Lys Ala Ser Gly Ser Lys Ala Asp Leu Phe Leu Glu Pro Gly Asp Lys

Val Ser Ile Gly Asp Ile Tyr Leu Glu Val Arg Ala Thr Pro Gly His  
115 120

Thr Ala Gly Cys Val Thr Tyr Val Thr Gly Glu Gly Ala Asp Gln Pro  
130 135 140

Gln Pro Arg Met Ala Phe Thr Gly Asp Ala Val Leu Ile Arg Gly Cys  
145 150 155 160

Gly Arg Thr Asp Phe Gln Glu Gly Ser Ser Gln Leu Tyr Glu Ser  
165 170 175

Val His Ser Gln Ile Phe Thr Leu Pro Lys Asp Thr Leu Ile Tyr Pro  
180 185 190

Ala His Asp Tyr Lys Gly Phe Glu Val Ser Thr Val Gly Glu Glu Met  
195 200 205

Gln His Asn Pro Arg Leu Thr Lys Asp Lys Glu Thr Phe Lys Thr Ile  
210 215 220

Met Ser Asn Leu Asn Leu Ser Tyr Pro Lys Met Ile Asp Val Ala Val  
225 230 235 240

Pro Ala Asn Met Val Cys Gly Leu Gln Asp Val Pro Ser Gln Ala Asn  
245 250 255

<210> 1453

<211> 1311

<212> DNA

<213> Arabidopsis thaliana

<400> 1453  
atggatgac tctccaagct tctctcttc ctctctcca ctatctccat taccaccgca 60

ttaccgata aaccggggtc gggcacaata aactcaaat ccgtctctgt tgctctcttt 120

gactcacact acacagaact agcagagctc gtcgaaaaag ctctctctct ccaaacctta 180

gaagaagctg ttggtaaca caacatcaca atctttgtc ctctgaacga tgcttagaa 240

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caatctttat taatgtttca cattcttccc aaaagaatca cttctccaca attctctctc 360

gccgtcgta gccaccgtac tctctccaac gaccacctcc atttcaccaa cggaaaagtc 420

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<210> 1454

<211> 436

<212> PRT

<213> Arabidopsis thaliana

<400> 1454

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 20 25 30

Asn Ser Val Leu Val Ala Leu Leu Asp Ser His Tyr Thr Glu Leu Ala  
 35 40 45

Glu Leu Val Glu Lys Ala Leu Leu Leu Gln Thr Leu Glu Glu Ala Val  
 50 55 60

Gly Gln His Asn Ile Thr Ile Phe Ala Pro Arg Asn Asp Ala Leu Glu  
 65 70 75 80

047-E2F-PCT.ST25.txt

Lys Asn Leu Asp Pro Glu Phe Lys Ser Phe Leu Leu Gln Pro Lys Asn  
 85 90 95  
 Leu Lys Ser Leu Gln Ser Leu Leu Met Phe His Ile Leu Pro Lys Arg  
 100 105 110  
 Ile Thr Ser Pro Gln Phe Ser Ser Ala Val Val Ser His Arg Thr Leu  
 115 120 125  
 Ser Asn Asp His Leu His Phe Thr Asn Gly Lys Val Asn Ser Ala Glu  
 130 135 140  
 Ile Thr Lys Pro Asp Asp Leu Thr Arg Pro Asp Gly Ile Ile His Gly  
 145 150 155 160  
 Ile Glu Arg Leu Leu Ile Pro Arg Ser Val Gln Glu Asp Phe Asn Arg  
 165 170 175  
 Arg Arg Ser Leu Arg Ser Ile Ala Ala Val Leu Pro Glu Gly Ala Pro  
 180 185 190  
 Glu Val Asp Pro Arg Thr His Arg Leu Lys Lys Lys Pro Ala Pro Ile  
 195 200 205  
 Pro Ala Gly Ala Pro Pro Val Leu Pro Val Tyr Asp Ala Met Ser Pro  
 210 215 220  
 Gly Pro Ser Leu Ala Pro Ala Pro Ala Pro Gly Pro Gly Gly Pro Arg  
 225 230 235 240  
 His His Phe Asn Gly Glu Ala Gln Val Lys Asp Phe Ile His Thr Leu  
 245 250 255  
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 Thr Ser Leu Ala Thr Glu Met Gly Arg Leu Val Ser Glu Gly Tyr Val  
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 Asp Gln Leu Ser Glu Pro Gly Ala Pro Glu Gln Ile Met Tyr Tyr His  
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 Ile Ile Pro Glu Tyr Gln Thr Glu Glu Ser Met Tyr Asn Ser Val Arg  
 325 330 335

Arg Phe Gly Lys Ile Arg Tyr Asp Ser Leu Arg Phe Pro His Lys Val  
 340 345 350

Glu Ala Gln Glu Ala Asp Gly Ser Val Lys Phe Gly His Gly Asp Gly  
 355 360 365

Ser Ala Tyr Leu Phe Asp Pro Asp Ile Tyr Thr Asp Gly Arg Ile Ser  
 370 375 380

Val Gln Gly Ile Asp Gly Val Leu Phe Pro Glu Glu Lys Thr Pro Val  
 385 390 395 400

Glu Lys Lys Thr Gly Val Pro Val Val Lys Lys Ala Pro Lys Pro Arg  
 405 410 415

Arg Gly Lys Leu Met Glu Val Ala Cys Thr Met Leu Gly Ser Gln Phe  
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Pro Thr Cys Gln  
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<211> 1944

<212> DNA

<213> Arabidopsis thaliana

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 aaggagcatc tgagtcgata cgctttcaag agctctttga ctgatattcc tctcgtctcc 240  
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&lt;210&gt; 1456

&lt;211&gt; 647

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1456

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Thr Val Phe Phe Met Val Ala Met Leu Val Ser Leu Leu Val Ser Ser  
20 25 30



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Leu Pro Val Leu Val Ala Ile Gly Asp Val Leu Val Pro Thr Phe Leu  
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 Leu Ser Ser Phe Thr Cys Leu Thr Cys Tyr Gly Phe Lys Glu His Leu  
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 Ser Arg Tyr Ala Phe Lys Ser Ser Leu Thr Asp Ile Pro Leu Val Ser  
 65 70 75 80  
 Leu Val Arg Ser Phe Leu Val Ile Cys Val Tyr Ser Leu Ser Asp Ala  
 85 90 95  
 Pro Ala Leu Ser His Gly Pro Tyr Leu Gly Thr Val Ser Leu Cys Ser  
 100 105 110  
 Val Val Ser Val Val Leu Leu Ser Val Lys Ala Cys Val Phe Thr Ala  
 115 120 125  
 Asn Ser Gln Leu Asn Asp Gln Ala Ser Ser Ser Pro Ser Arg Gln Arg  
 130 135 140  
 Leu His Leu Lys Lys Ser Trp Gly Met Pro Val Leu Phe Leu Ser Ser  
 145 150 155 160  
 Val Val Phe Ala Leu Gly His Met Val Val Ala Tyr Arg Thr Ser Cys  
 165 170 175  
 Arg Ala Arg Arg Lys Leu Leu Tyr His Arg Val Asp Pro Glu Ala Val  
 180 185 190  
 Leu Ser Cys Lys Ser Val Phe Ser Gly Tyr Gln Lys Val Pro Arg Ser  
 195 200 205  
 Pro Ile Pro Leu Val Gly Lys Ala Ser Lys Val Asp Gly Glu Ala Arg  
 210 215 220  
 Arg Lys Leu His Pro Ser Val Ser Asn Asp Asp Gly Glu Leu Pro Ala  
 225 230 235 240  
 Arg Leu Leu Ala Asp Leu Asp Ser Leu Phe Ile Thr Val Arg Gly Leu  
 245 250 255  
 Thr Val His Tyr Lys Ile Cys Thr Pro Ala Ser Pro Arg His Ser Ile  
 260 265 270  
 Ser Ser Ser Val Glu Ala Asn Ser Met Leu Asn Met Pro Glu Ala Met  
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275 047-E2F-PCT.ST25.txt  
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 Asn Ser Ser Ser Leu His Asp Pro Leu Leu Asp Gly Leu Pro Thr Ser  
 325 330 335  
 Pro Arg Leu Phe Lys Asp Ile Gln Glu Glu Ser Cys Arg Glu Asp Gly  
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 Ile Asn Val Ser Asn Phe Gly Ala Thr Glu Gln Gln Asp Val Gly Gly  
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 Asn Gly Gln Phe Gly Val Val Leu Val His Gly Phe Gly Gly Gly Val  
 370 375 380  
 Phe Ser Trp Arg His Val Met Ser Ser Leu Ala His Gln Leu Gly Cys  
 385 390 395 400  
 Val Val Thr Ala Phe Asp Arg Pro Gly Trp Gly Leu Thr Ala Arg Pro  
 405 410 415  
 His Lys Lys Asp Leu Glu Glu Arg Glu Met Pro Asn Pro Tyr Thr Leu  
 420 425 430  
 Asp Asn Gln Val Asp Met Leu Leu Ala Phe Cys His Glu Met Gly Phe  
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 Ala Ser Val Val Leu Val Gly His Asp Asp Gly Gly Leu Leu Ala Leu  
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 Lys Ala Ala Gln Arg Leu Leu Glu Thr Lys Asp Pro Ile Lys Val Lys  
 465 470 475 480  
 Gly Val Val Leu Leu Asn Val Ser Leu Thr Arg Glu Val Val Pro Ala  
 485 490 495  
 Phe Ala Arg Ile Leu Leu His Thr Ser Leu Gly Lys Lys His Leu Val  
 500 505 510  
 Arg Pro Leu Leu Arg Thr Glu Ile Ala Gln Val Val Asn Arg Arg Ala  
 515 520 525

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Trp Tyr Asp Pro Ala Lys Met Thr Thr Asp Val Leu Arg Leu Tyr Lys  
530 535 540

Ala Pro Leu His Val Glu Gly Trp Asp Glu Ala Leu His Glu Ile Gly  
545 550 555 560

Arg Leu Ser Ser Glu Met Val Leu Pro Thr Gln Asn Ala Leu Ser Leu  
565 570 575

Leu Lys Ala Val Glu Asn Leu Pro Val Leu Val Val Ala Gly Ala Glu  
580 585 590

Asp Ala Leu Val Pro Leu Lys Ser Ser Gln Val Met Ala Ser Lys Leu  
595 600 605

Glu Asn Ser Arg Leu Val Ala Ile Ser Gly Cys Gly His Leu Pro His  
610 615 620

Glu Glu Cys Pro Lys Ala Leu Leu Ala Ala Met Cys Pro Phe Ile Ser  
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Arg Leu Val Phe Ser Glu Asp  
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<210> 1457

<211> 1305

<212> DNA

<213> Arabidopsis thaliana

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<210> 1458

<211> 434

<212> PRT

<213> *Arabidopsis thaliana*

<400> 1458

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 20 25 30

Asn Asn Gln Tyr Ser Asn Gln Asp Ser Glu Asn Gly Asp Leu Met Val  
 35 40 45

Ser Leu Pro Glu Thr Ser Ser Cys Ser Val Ser Gly Ser His Gly Ser  
 50 55 60

Glu Ser Arg Lys Val Leu Ile Ser Arg Ile Asn Ser Pro Asn Leu Asn  
 65 70 75 80

Met Lys Glu Ser Ala Ala Ala Asp Ile Val Val Val Asp Ile Ser Ala  
 85 90 95

Gly Asp Glu Ile Asn Gly Ser Asp Ile Thr Ser Glu Lys Lys Met Ile  
 100 105 110

047-E2F-PCT.ST25.txt

Ser Arg Thr Glu Ser Arg Ser Leu Phe Glu Phe Lys Ser Val Pro Leu  
115 120 125

Tyr Gly Phe Thr Ser Ile Cys Gly Arg Arg Pro Glu Met Glu Asp Ala  
130 135 140

Val Ser Thr Ile Pro Arg Phe Leu Gln Ser Ser Ser Gly Ser Met Leu  
145 150 155 160

Asp Gly Arg Phe Asp Pro Gln Ser Ala Ala His Phe Phe Gly Val Tyr  
165 170 175

Asp Gly His Gly Gly Ser Gln Val Ala Asn Tyr Cys Arg Glu Arg Met  
180 185 190

His Leu Ala Leu Ala Glu Glu Ile Ala Lys Glu Lys Pro Met Leu Cys  
195 200 205

Asp Gly Asp Thr Trp Leu Glu Lys Trp Lys Lys Ala Leu Phe Asn Ser  
210 215 220

Phe Leu Arg Val Asp Ser Glu Ile Glu Ser Val Ala Pro Glu Thr Val  
225 230 235 240

Gly Ser Thr Ser Val Val Ala Val Val Phe Pro Ser His Ile Phe Val  
245 250 255

Ala Asn Cys Gly Asp Ser Arg Ala Val Leu Cys Arg Gly Lys Thr Ala  
260 265 270

Leu Pro Leu Ser Val Asp His Lys Pro Asp Arg Glu Asp Glu Ala Ala  
275 280 285

Arg Ile Glu Ala Ala Gly Gly Lys Val Ile Gln Trp Asn Gly Ala Arg  
290 295 300

Val Phe Gly Val Leu Ala Met Ser Arg Ser Ile Gly Asp Arg Tyr Leu  
305 310 315 320

Lys Pro Ser Ile Ile Pro Asp Pro Glu Val Thr Ala Val Lys Arg Val  
325 330 335

Lys Glu Asp Asp Cys Leu Ile Leu Ala Ser Asp Gly Val Trp Asp Val  
340 345 350

Met Thr Asp Glu Glu Ala Cys Glu Met Ala Arg Lys Arg Ile Leu Leu  
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355 047-E2F-PCT.ST25.txt 360 365

Trp His Lys Lys Asn Ala Val Ala Gly Asp Ala Ser Leu Leu Ala Asp  
370 375 380

Glu Arg Arg Lys Glu Gly Lys Asp Pro Ala Ala Met Ser Ala Ala Glu  
385 390 395 400

Tyr Leu Ser Lys Leu Ala Ile Gln Arg Gly Ser Lys Asp Asn Ile Ser  
405 410 415

Val Val Val Val Asp Leu Lys Pro Arg Arg Lys Leu Lys Ser Lys Pro  
420 425 430

Leu Asn

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<212> DNA  
<213> Arabidopsis thaliana

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<210> 1460

<211> 332

<212> PRT

<213> Arabidopsis thaliana

<400> 1460

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 35 40 45

Cys Ser Phe Gln Ser Asp Phe Lys Asp Phe Thr Gly Lys Cys Ser Asp  
 50 55 60

Ala Val Lys Ile Ala Gly Phe Ala Leu Ala Thr Ser Ala Leu Val Val  
 65 70 75 80

Ser Gly Ala Ser Ala Glu Gly Ala Pro Lys Arg Leu Thr Tyr Asp Glu  
 85 90 95

Ile Gln Ser Lys Thr Tyr Met Glu Val Lys Gly Thr Gly Thr Ala Asn  
 100 105 110

Gln Cys Pro Thr Ile Asp Gly Gly Ser Glu Thr Phe Ser Phe Lys Pro  
 115 120 125

Gly Lys Tyr Ala Gly Lys Lys Phe Cys Phe Glu Pro Thr Ser Phe Thr  
 130 135 140

Val Lys Ala Asp Ser Val Ser Lys Asn Ala Pro Pro Glu Phe Gln Asn  
 145 150 155 160

Thr Lys Leu Met Thr Arg Leu Thr Tyr Thr Leu Asp Glu Ile Glu Gly  
 165 170 175

Pro Phe Glu Val Ala Ser Asp Gly Ser Val Asn Phe Lys Glu Glu Asp  
 Page 2265

Gly Ile Asp Tyr Ala Ala Val Thr Val Gln Leu Pro Gly Gly Glu Arg  
 195 200  
 Val Pro Phe Leu Phe Thr Val Lys Gln Leu Asp Ala Ser Gly Lys Pro  
 210 215  
 Asp Ser Phe Thr Gly Lys Phe Leu Val Pro Ser Tyr Arg Gly Ser Ser  
 225 230 235 240  
 Phe Leu Asp Pro Lys Gly Arg Gly Gly Ser Thr Gly Tyr Asp Asn Ala  
 245 250 255  
 Val Ala Leu Pro Ala Gly Gly Arg Gly Asp Glu Glu Glu Leu Val Lys  
 260 265  
 Glu Asn Val Lys Asn Thr Ala Ala Ser Val Gly Glu Ile Thr Leu Lys  
 275 280 285  
 Val Thr Lys Ser Lys Pro Glu Thr Gly Glu Val Ile Gly Val Phe Glu  
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&lt;210&gt; 1461

&lt;211&gt; 2355

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1461

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tatgtagaga	aagttccgat	gacaataatg	aacatgagac	ccgataaagc	aagcgggtat	1860
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gaagagaatc	acgtttgccg	atcatcgga	tgtcaatcgc	tagacgcgat	cggaccgcac	2040
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ggaggagata	gagaagggat	tcacacggtg	tttctattca	cgacgccgcc	ggcgattcac	2160
ggatcgccga	ggaagcattt	ggtaggattc	gagaagattc	gattggggaa	gagggaaagaa	2220
gcggtgggta	ggtttaaggt	agagatatgt	aaagatctga	gtgtggttga	tgagattggg	2280

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<210> 1462

<211> 784

<212> PRT

<213> Arabidopsis thaliana

<400> 1462

Met Gly Ser Ser Ser Pro Leu Thr Arg Arg Asn Arg Ala Pro Pro Ser  
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Ser Val Ser Ser Val Tyr Leu Ile Phe Leu Cys Phe Phe Leu Tyr Phe  
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Leu Asn Phe Ser Asn Ala Gln Ser Ser Pro Val Phe Ala Cys Asp Val  
 35 40 45

Ala Ala Asn Pro Ser Leu Ala Ala Tyr Gly Phe Cys Asn Thr Val Leu  
 50 55 60

Lys Ile Glu Tyr Arg Val Ala Asp Leu Val Ala Arg Leu Thr Leu Gln  
 65 70 75 80

Glu Lys Ile Gly Phe Leu Val Ser Lys Ala Asn Gly Val Thr Arg Leu  
 85 90 95

Gly Ile Pro Thr Tyr Glu Trp Trp Ser Glu Ala Leu His Gly Val Ser  
 100 105 110

Tyr Ile Gly Pro Gly Thr His Phe Ser Ser Gln Val Pro Gly Ala Thr  
 115 120 125

Ser Phe Pro Gln Val Ile Leu Thr Ala Ala Ser Phe Asn Val Ser Leu  
 130 135 140

Phe Gln Ala Ile Gly Lys Val Val Ser Thr Glu Ala Arg Ala Met Tyr  
 145 150 155 160

Asn Val Gly Leu Ala Gly Leu Thr Tyr Trp Ser Pro Asn Val Asn Ile  
 165 170 175

Phe Arg Asp Pro Arg Trp Gly Arg Gly Gln Glu Thr Pro Gly Glu Asp  
 180 185 190

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Pro Leu Leu Ala Ser Lys Tyr Ala Ser Gly Tyr Val Lys Gly Leu Gln  
195 200 205

Glu Thr Asp Gly Gly Asp Ser Asn Arg Leu Lys Val Ala Ala Cys Cys  
210 215 220

Lys His Tyr Thr Ala Tyr Asp Val Asp Asn Trp Lys Gly Val Glu Arg  
225 230 235 240

Tyr Ser Phe Asn Ala Val Val Thr Gln Gln Asp Met Asp Asp Thr Tyr  
245 250 255

Gln Pro Pro Phe Lys Ser Cys Val Val Asp Gly Asn Val Ala Ser Val  
260 265 270

Met Cys Ser Tyr Asn Gln Val Asn Gly Lys Pro Thr Cys Ala Asp Pro  
275 280 285

Asp Leu Leu Ser Gly Val Ile Arg Gly Glu Trp Lys Leu Asn Gly Tyr  
290 295 300

Ile Val Ser Asp Cys Asp Ser Val Asp Val Leu Tyr Lys Asn Gln His  
305 310 315 320

Tyr Thr Lys Thr Pro Ala Glu Ala Ala Ala Ile Ser Ile Leu Ala Gly  
325 330 335

Leu Asp Leu Asn Cys Gly Ser Phe Leu Gly Gln His Thr Glu Glu Ala  
340 345 350

Val Lys Ser Gly Leu Val Asn Glu Ala Ala Ile Asp Lys Ala Ile Ser  
355 360 365

Asn Asn Phe Leu Thr Leu Met Arg Leu Gly Phe Phe Asp Gly Asn Pro  
370 375 380

Lys Asn Gln Ile Tyr Gly Gly Leu Gly Pro Thr Asp Val Cys Thr Ser  
385 390 395 400

Ala Asn Gln Glu Leu Ala Ala Asp Ala Ala Arg Gln Gly Ile Val Leu  
405 410 415

Leu Lys Asn Thr Gly Cys Leu Pro Leu Ser Pro Lys Ser Ile Lys Thr  
420 425 430

Leu Ala Val Ile Gly Pro Asn Ala Asn Val Thr Lys Thr Met Ile Gly

435

440

445

Asn Tyr Glu Gly Thr Pro Cys Lys Tyr Thr Thr Pro Leu Gln Gly Leu  
 450 455 460  
 Ala Gly Thr Val Ser Thr Thr Tyr Leu Pro Gly Cys Ser Asn Val Ala  
 465 470 475 480  
 Cys Ala Val Ala Asp Val Ala Gly Ala Thr Lys Leu Ala Ala Thr Ala  
 485 490 495  
 Asp Val Ser Val Leu Val Ile Gly Ala Asp Gln Ser Ile Glu Ala Glu  
 500 505 510  
 Ser Arg Asp Arg Val Asp Leu His Leu Pro Gly Gln Gln Gln Glu Leu  
 515 520 525  
 Val Ile Gln Val Ala Lys Ala Ala Lys Gly Pro Val Leu Leu Val Ile  
 530 535 540  
 Met Ser Gly Gly Gly Phe Asp Ile Thr Phe Ala Lys Asn Asp Pro Lys  
 545 550 555 560  
 Ile Ala Gly Ile Leu Trp Val Gly Tyr Pro Gly Glu Ala Gly Gly Ile  
 565 570 575  
 Ala Ile Ala Asp Ile Ile Phe Gly Arg Tyr Asn Pro Ser Gly Lys Leu  
 580 585 590  
 Pro Met Thr Trp Tyr Pro Gln Ser Tyr Val Glu Lys Val Pro Met Thr  
 595 600 605  
 Ile Met Asn Met Arg Pro Asp Lys Ala Ser Gly Tyr Pro Gly Arg Thr  
 610 615 620  
 Tyr Arg Phe Tyr Thr Gly Glu Thr Val Tyr Ala Phe Gly Asp Gly Leu  
 625 630 635 640  
 Ser Tyr Thr Lys Phe Ser His Thr Leu Val Lys Ala Pro Ser Leu Val  
 645 650 655  
 Ser Leu Gly Leu Glu Glu Asn His Val Cys Arg Ser Ser Glu Cys Gln  
 660 665 670  
 Ser Leu Asp Ala Ile Gly Pro His Cys Glu Asn Ala Val Ser Gly Gly  
 675 680 685

Gly Ser Ala Phe Glu Val His Ile Lys Val Arg Asn Gly Gly Asp Arg  
690 695 700

Glu Gly Ile His Thr Val Phe Leu Phe Thr Thr Pro Pro Ala Ile His  
705 710 715

Gly Ser Pro Arg Lys His Leu Val Gly Phe Glu Lys Ile Arg Leu Gly  
725 730 735

Lys Arg Glu Glu Ala Val Val Arg Phe Lys Val Glu Ile Cys Lys Asp  
740 745 750

Leu Ser Val Val Asp Glu Ile Gly Lys Arg Lys Ile Gly Leu Gly Lys  
755 760 765

His Leu Leu His Val Gly Asp Leu Lys His Ser Leu Ser Ile Arg Ile  
770 775 780

<210> 1463

<211> 1086

<212> DNA

<213> Arabidopsis thaliana

<400> 1463

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cttaaggcag ttggagtga tgaagtgggt ttggccatca attatcagcc agaggatgatg	180
ctgaacttct tgaaggactt tgagaccaag ctggaaatca aaatcacttg ctcaacaagag	240
accgagccac taggtaccgc tggctcctctg gctctagcga gagacaaatt gcttgatgga	300
tctggagagc ccttctttgt tcttaacagt gatgtgatta gtgagtaccc tcttaaagaa	360
atgcttgagt ttcacaatac tcacggtggg gaagcctcca taatggtaac aaaggtggat	420
gaaccgtcga aatatggagt ggttggttatg gaagaaagca ctggaagagt ggagaagttt	480
gtggaaaagc caaaactgta ttaggtgaac aagatcaacg ctgggattta tcttctgaac	540
ccatctgttc ttgataagat tgagctaaga cggacttcaa tcgaaaaaga gactttccct	600
aagattgcag cagcgcaagg gctctatgct atggtgctac cagggttttg gatggacatt	660
gggcaacccc gtgactacat aacgggtttg agactctact tagactccct taggaagaaa	720
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<210> 1464

<211> 361

<212> PRT

<213> Arabidopsis thaliana

<400> 1464

Met Lys Ala Leu Ile Leu Val Gly Gly Phe Gly Thr Arg Leu Arg Pro  
 1 5 10 15

Leu Thr Leu Ser Phe Pro Lys Pro Leu Val Asp Phe Ala Asn Lys Pro  
 20 25 30

Met Ile Leu His Gln Ile Glu Ala Leu Lys Ala Val Gly Val Asp Glu  
 35 40 45

Val Val Leu Ala Ile Asn Tyr Gln Pro Glu Val Met Leu Asn Phe Leu  
 50 55 60

Lys Asp Phe Glu Thr Lys Leu Glu Ile Lys Ile Thr Cys Ser Gln Glu  
 65 70 75 80

Thr Glu Pro Leu Gly Thr Ala Gly Pro Leu Ala Leu Ala Arg Asp Lys  
 85 90 95

Leu Leu Asp Gly Ser Gly Glu Pro Phe Phe Val Leu Asn Ser Asp Val  
 100 105 110

Ile Ser Glu Tyr Pro Leu Lys Glu Met Leu Glu Phe His Lys Ser His  
 115 120 125

Gly Gly Glu Ala Ser Ile Met Val Thr Lys Val Asp Glu Pro Ser Lys  
 130 135 140

Tyr Gly Val Val Val Met Glu Glu Ser Thr Gly Arg Val Glu Lys Phe  
 145 150 155 160

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Val Glu Lys Pro Lys Leu Tyr Val Gly Asn Lys Ile Asn Ala Gly Ile  
165 170 175

Tyr Leu Leu Asn Pro Ser Val Leu Asp Lys Ile Glu Leu Arg Pro Thr  
180 185 190

Ser Ile Glu Lys Glu Thr Phe Pro Lys Ile Ala Ala Ala Gln Gly Leu  
195 200 205

Tyr Ala Met Val Leu Pro Gly Phe Trp Met Asp Ile Gly Gln Pro Arg  
210 215 220

Asp Tyr Ile Thr Gly Leu Arg Leu Tyr Leu Asp Ser Leu Arg Lys Lys  
225 230 235 240

Ser Pro Ala Lys Leu Thr Ser Gly Pro His Ile Val Gly Asn Val Leu  
245 250 255

Val Asp Glu Thr Ala Thr Ile Gly Glu Gly Cys Leu Ile Gly Pro Asp  
260 265 270

Val Ala Ile Gly Pro Gly Cys Ile Val Glu Ser Gly Val Arg Leu Ser  
275 280 285

Arg Cys Thr Val Met Arg Gly Val Arg Ile Lys Lys His Ala Cys Ile  
290 295 300

Ser Ser Ser Ile Ile Gly Trp His Ser Thr Val Gly Gln Trp Ala Arg  
305 310 315 320

Ile Glu Asn Met Thr Ile Leu Gly Glu Asp Val His Val Ser Asp Glu  
325 330 335

Ile Tyr Ser Asn Gly Gly Val Val Leu Pro His Lys Glu Ile Lys Ser  
340 345 350

Asn Ile Leu Lys Pro Glu Ile Val Met  
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<210> 1465

<211> 993

<212> DNA

<213> Arabidopsis thaliana

<400> 1465

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tgtcctagcg tagagctcat cgttaagcag gcggttacta caaaattcaa acaaaactgtc    180
acaacggctc ctgcaacggt gccgatgttc ttccacgact gcttcgtcga gggatgtgat    240
gcgtctgtgt ttatagcatc tgagaatgaa gacgcagaga aagacgcaga tgacaataaa    300
tctctcgccg gagacggatt tgacaccgtg attaaagcta aaaccgctgt agaattctaa    360
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ctcgttgtag ggccagagtt taaggtggag ctaggggagac gagacgggct cgtctcgaaa    480
gcgtctagag tgaccggcaa gttacctgaa ccagggcttg acgtgagagg tctagtccag    540
atcttcgcta gtaacggggt ttcatgacc gacatgatcg ctctttcagg cgcacatata    600
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ccagtggacc ctacgatgga cccgggtctac gctcagcagc tgatacaagc ctgctctgac    720
cccaaccagc atgctgtagt agacattgac ctaacgtcca gagatacctt cgacaatagc    780
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gatctctcgt ctacaggctac ggtggtcagg ttgctaaca acgctgaaga attctacagc    900
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&lt;210&gt; 1466

&lt;211&gt; 330

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1466

Met Asp Ile Arg Ser Asp Asp Ala Lys Lys Pro Met Met Met Trp Phe  
 1 5 10 15

Leu Gly Met Leu Leu Phe Ser Met Val Ala Glu Ser Asn Ala Gln Leu  
 20 25 30

Ser Glu Asn Tyr Tyr Ala Ser Thr Cys Pro Ser Val Glu Leu Ile Val  
 35 40 45

Lys Gln Ala Val Thr Thr Lys Phe Lys Gln Thr Val Thr Thr Ala Pro  
 50 55 60



Ala Thr Leu Arg Met Phe Phe His Asp Cys Phe Val Glu Gly Cys Asp  
65 70 75 80

Ala Ser Val Phe Ile Ala Ser Glu Asn Glu Asp Ala Glu Lys Asp Ala  
85 90 95

Asp Asp Asn Lys Ser Leu Ala Gly Asp Gly Phe Asp Thr Val Ile Lys  
100 105 110

Ala Lys Thr Ala Val Glu Ser Gln Cys Pro Gly Val Val Ser Cys Ala  
115 120 125

Asp Ile Leu Ala Leu Ala Ala Arg Asp Val Val Val Leu Val Gly Gly  
130 135 140

Pro Glu Phe Lys Val Glu Leu Gly Arg Arg Asp Gly Leu Val Ser Lys  
145 150 155 160

Ala Ser Arg Val Thr Gly Lys Leu Pro Glu Pro Gly Leu Asp Val Arg  
165 170 175

Gly Leu Val Gln Ile Phe Ala Ser Asn Gly Leu Ser Leu Thr Asp Met  
180 185 190

Ile Ala Leu Ser Gly Ala His Thr Ile Gly Ser Ser His Cys Asn Arg  
195 200 205

Phe Ala Asn Arg Leu His Asn Phe Ser Thr Phe Met Pro Val Asp Pro  
210 215 220

Thr Met Asp Pro Val Tyr Ala Gln Gln Leu Ile Gln Ala Cys Ser Asp  
225 230 235 240

Pro Asn Pro Asp Ala Val Val Asp Ile Asp Leu Thr Ser Arg Asp Thr  
245 250 255

Phe Asp Asn Ser Tyr Tyr Gln Asn Leu Val Ala Arg Lys Gly Leu Phe  
260 265 270

Thr Ser Asp Gln Ala Leu Phe Asn Asp Leu Ser Ser Gln Ala Thr Val  
275 280 285

Val Arg Phe Ala Asn Asn Ala Glu Glu Phe Tyr Ser Ala Phe Ser Ser  
290 295 300

Ala Met Arg Asn Leu Gly Arg Val Gly Val Lys Val Gly Asn Gln Gly  
305 310 315 320

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Glu Ile Arg Arg Asp Cys Ser Ala Phe Asn  
325 330

<210> 1467

<211> 663

<212> DNA

<213> Arabidopsis thaliana

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aagactcctt tactcataga gatgaacccg attcacaaga agattccggt tctcatccac      180
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gatgcatccc caatccttcc ctctgaccc taccagaagt ctcgagctag attttgggct      300
gaattcatcg acaaaaagtt ttacgacca tcattggaagg tatgggcaac aatgggcgaa      360
gaacatgcag cagtgaagaa ggaattgtt gaacatttca agacatttga gacagagctc      420
ggagacaaac cttattacgg tggatgaagta ttggatacc tagacattgc attaatggga      480
tactacagct ggttcaaggc catggagaaa tttggtgaat tcagtatcga aacagagttt      540
cctatatattg ctacgtggac caagaggtgt ttggaaagag agagtgtggt caaggcattg      600
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<210> 1468

<211> 220

<212> PRT

<213> Arabidopsis thaliana

<400> 1468

Met Ala Asn Asp Gln Val Ile Leu Leu Asp Tyr Trp Pro Ser Met Phe  
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Gly Met Arg Thr Lys Met Ala Leu Ala Glu Lys Gly Val Lys Tyr Glu  
20 25 30

Tyr Lys Glu Thr Asp Pro Trp Val Lys Thr Pro Leu Leu Ile Glu Met  
35 40 45

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Asn Pro Ile His Lys Lys Ile Pro Val Leu Ile His Asn Gly Lys Pro  
 50 55 60  
 Ile Cys Glu Ser Leu Ile Gln Leu Glu Tyr Ile Asp Glu Val Trp Ser  
 65 70 75 80  
 Asp Ala Ser Pro Ile Leu Pro Ser Asp Pro Tyr Gln Lys Ser Arg Ala  
 85 90 95  
 Arg Phe Trp Ala Glu Phe Ile Asp Lys Lys Phe Tyr Asp Pro Ser Trp  
 100 105 110  
 Lys Val Trp Ala Thr Met Gly Glu Glu His Ala Ala Val Lys Lys Glu  
 115 120 125  
 Leu Leu Glu His Phe Lys Thr Leu Glu Thr Glu Leu Gly Asp Lys Pro  
 130 135 140  
 Tyr Tyr Gly Gly Glu Val Phe Gly Tyr Leu Asp Ile Ala Leu Met Gly  
 145 150 155 160  
 Tyr Tyr Ser Trp Phe Lys Ala Met Glu Lys Phe Gly Glu Phe Ser Ile  
 165 170 175  
 Glu Thr Glu Phe Pro Ile Leu Thr Thr Trp Thr Lys Arg Cys Leu Glu  
 180 185 190  
 Arg Glu Ser Val Val Lys Ala Leu Ala Asp Ser Asp Arg Ile Ile Glu  
 195 200 205  
 Tyr Val Tyr Val Leu Arg Lys Lys Phe Gly Ala Ala  
 210 215 220

<210> 1469

<211> 387

<212> DNA

<213> Arabidopsis thaliana

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actccaggac aacaaacgtt gccacagcca caaccaactc tgccacagcc cactggggtg 240  
 ccaccgatgc cgagcacaca gataccatca ttgcccaacc aggtgcagcc cacaatccct 300  
 aacattccac agatcaactt ccctagcaac tttcccttca actttccttt caacattcct 360  
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<210> 1470

<211> 128

<212> PRT

<213> *Arabidopsis thaliana*

<400> 1470

Met Ala Pro Leu Lys Asn Ser Phe Val Thr Ser Leu Val Ile Ala Leu  
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Thr Phe Thr Ser Phe Phe Thr Ser Leu Ser Ala His Arg His Leu Leu  
 20 25 30

Gln Ser Thr Pro Val Thr Gln Pro Pro Ala Leu Thr Phe Pro Pro Leu  
 35 40 45

Pro Lys Thr Thr Met Pro Pro Val Pro Ser Leu Pro Thr Pro Gly Gln  
 50 55 60

Gln Thr Leu Pro Gln Pro Gln Pro Thr Leu Pro Gln Pro Thr Gly Leu  
 65 70 75 80

Pro Pro Met Pro Ser Thr Gln Ile Pro Ser Leu Pro Asn Gln Val Gln  
 85 90 95

Pro Thr Ile Pro Asn Ile Pro Gln Ile Asn Phe Pro Ser Asn Phe Pro  
 100 105 110

Phe Asn Phe Pro Phe Asn Ile Pro Phe Leu Thr Pro Pro Ser Lys  
 115 120 125

<210> 1471

<211> 2904

<212> DNA

<213> *Arabidopsis thaliana*

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&lt;400&gt; 1471

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&lt;210&gt; 1472

&lt;211&gt; 967

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1472

Met Gly Asn Phe Val Cys Ile Glu Ile Ser Gly Asp Gln Met Leu Asp  
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Arg Ile Ile Arg Cys Leu Cys Gly Lys Gly Tyr Ile Arg Asn Leu Glu  
 20 25 30

Lys Asn Leu Arg Ala Leu Gln Arg Glu Met Glu Asp Leu Arg Ala Thr  
 35 40 45

Gln His Glu Val Gln Asn Lys Val Ala Arg Glu Glu Ser Arg His Gln  
 50 55 60

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Gln Arg Leu Glu Ala Val Gln Val Trp Leu Asp Arg Val Asn Ser Ile  
65 70 75 80

Asp Ile Glu Cys Lys Asp Leu Leu Ser Val Ser Pro Val Glu Leu Gln  
85 90 95

Lys Leu Cys Leu Cys Gly Leu Cys Ser Lys Tyr Val Cys Ser Ser Tyr  
100 105 110

Lys Tyr Gly Lys Arg Val Phe Leu Leu Leu Glu Glu Val Thr Lys Leu  
115 120 125

Lys Ser Glu Gly Asn Phe Asp Glu Val Ser Gln Pro Pro Pro Arg Ser  
130 135 140

Glu Val Glu Glu Arg Pro Thr Gln Pro Thr Ile Gly Gln Glu Glu Met  
145 150 155 160

Leu Lys Lys Ala Trp Asn Arg Leu Met Glu Asp Gly Val Gly Ile Met  
165 170 175

Gly Leu His Gly Met Gly Gly Val Gly Lys Thr Thr Leu Phe Lys Lys  
180 185 190

Ile His Asn Lys Phe Ala Glu Thr Gly Gly Thr Phe Asp Ile Val Ile  
195 200 205

Trp Ile Val Val Ser Gln Gly Ala Lys Leu Ser Lys Leu Gln Glu Asp  
210 215 220

Ile Ala Glu Lys Leu His Leu Cys Asp Asp Leu Trp Lys Asn Lys Asn  
225 230 235 240

Glu Ser Asp Lys Ala Thr Asp Ile His Arg Val Leu Lys Gly Lys Arg  
245 250 255

Phe Val Leu Met Leu Asp Asp Ile Trp Glu Lys Val Asp Leu Glu Ala  
260 265 270

Ile Gly Ile Pro Tyr Pro Ser Glu Val Asn Lys Cys Lys Val Ala Phe  
275 280 285

Thr Thr Arg Asp Gln Lys Val Cys Gly Gln Met Gly Asp His Lys Pro  
290 295 300

Met Gln Val Lys Cys Leu Glu Pro Glu Asp Ala Trp Glu Leu Phe Lys

305 310 320

Asn Lys Val Gly Asp Asn Thr Leu Arg Ser Asp Pro Val Ile Val Gly  
325 330 335

Leu Ala Arg Glu Val Ala Gln Lys Cys Arg Gly Leu Pro Leu Ala Leu  
340 345 350

Ser Cys Ile Gly Glu Thr Met Ala Ser Lys Thr Met Val Gln Glu Trp  
355 360 365

Glu His Ala Ile Asp Val Leu Thr Arg Ser Ala Ala Glu Phe Ser Asp  
370 375 380

Met Gln Asn Lys Ile Leu Pro Ile Leu Lys Tyr Ser Tyr Asp Ser Leu  
385 390 395 400

Glu Asp Glu His Ile Lys Ser Cys Phe Leu Tyr Cys Ala Leu Phe Pro  
405 410 415

Glu Asp Asp Lys Ile Asp Thr Lys Thr Leu Ile Asn Lys Trp Ile Cys  
420 425 430

Glu Gly Phe Ile Gly Glu Asp Gln Val Ile Lys Arg Ala Arg Asn Lys  
435 440 445

Gly Tyr Glu Met Leu Gly Thr Leu Ile Arg Ala Asn Leu Leu Thr Asn  
450 455 460

Asp Arg Gly Phe Val Lys Trp His Val Val Met His Asp Val Val Arg  
465 470 475 480

Glu Met Ala Leu Trp Ile Ala Ser Asp Phe Gly Lys Gln Lys Glu Asn  
485 490 495

Tyr Val Val Arg Ala Arg Val Gly Leu His Glu Ile Pro Lys Val Lys  
500 505 510

Asp Trp Gly Ala Val Arg Arg Met Ser Leu Met Met Asn Glu Ile Glu  
515 520 525

Glu Ile Thr Cys Glu Ser Lys Cys Ser Glu Leu Thr Thr Leu Phe Leu  
530 535 540

Gln Ser Asn Gln Leu Lys Asn Leu Ser Gly Glu Phe Ile Arg Tyr Met  
545 550 555 560



Gln Lys Leu Val Val Leu Asp Leu Ser His Asn Pro Asp Phe Asn Glu  
 565 570 575  
 Leu Pro Glu Gln Ile Ser Gly Leu Val Ser Leu Gln Tyr Leu Asp Leu  
 580 585 590  
 Ser Trp Thr Arg Ile Glu Gln Leu Pro Val Gly Leu Lys Glu Leu Lys  
 595 600 605  
 Lys Leu Ile Phe Leu Asn Leu Cys Phe Thr Glu Arg Leu Cys Ser Ile  
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 Ser Gly Ile Ser Arg Leu Leu Ser Leu Arg Trp Leu Ser Leu Arg Glu  
 625 630 635 640  
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 660 665 670  
 Leu Asp Gln Arg Leu Ala Lys Leu Ile Ser Val Leu Arg Ile Glu Gly  
 675 680 685  
 Phe Leu Gln Lys Pro Phe Asp Leu Ser Phe Leu Ala Ser Met Glu Asn  
 690 695 700  
 Leu Tyr Gly Leu Leu Val Glu Asn Ser Tyr Phe Ser Glu Ile Asn Ile  
 705 710 715 720  
 Lys Cys Arg Glu Ser Glu Thr Glu Ser Ser Tyr Leu His Ile Asn Pro  
 725 730 735  
 Lys Ile Pro Cys Phe Thr Asn Leu Thr Gly Leu Ile Ile Met Lys Cys  
 740 745 750  
 His Ser Met Lys Asp Leu Thr Trp Ile Leu Phe Ala Pro Asn Leu Val  
 755 760 765  
 Asn Leu Asp Ile Arg Asp Ser Arg Glu Val Gly Glu Ile Ile Asn Lys  
 770 775 780  
 Glu Lys Ala Ile Asn Leu Thr Ser Ile Ile Thr Pro Phe Gln Lys Leu  
 785 790 795 800  
 Glu Arg Leu Phe Leu Tyr Gly Leu Pro Lys Leu Glu Ser Ile Tyr Trp  
 805 810 815

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Ser Pro Leu Pro Phe Pro Leu Leu Ser Asn Ile Val Val Lys Tyr Cys  
820 825 830

Pro Lys Leu Arg Lys Leu Pro Leu Asn Ala Thr Ser Val Pro Leu Val  
835 840 845

Glu Glu Phe Glu Ile Arg Met Asp Pro Pro Glu Gln Glu Asn Glu Leu  
850 855 860

Glu Trp Glu Asp Glu Asp Thr Lys Asn Arg Phe Leu Pro Ser Ile Lys  
865 870 875 880

Pro Leu Val Arg Arg Leu Lys Ile His Tyr Ser Gly Met Gly Phe Leu  
885 890 895

Asn Val Lys Asn Gln Asn Pro Arg Phe Phe Phe Tyr Cys Phe Ile Tyr  
900 905 910

Leu Leu Val Val His Leu Asp Cys Ile Ile Asp Leu His Ser Asp Thr  
915 920 925

Ser Gly Met Cys Cys Val Val His Leu Asp Tyr Val Phe His Phe Pro  
930 935 940

Phe Val Phe Pro Lys Thr Phe Cys Ile Leu Phe Arg Leu His Phe Tyr  
945 950 955 960

Thr Ile Lys Ser Leu Cys Val  
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<211> 597

<212> DNA

<213> Arabidopsis thaliana

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<210> 1474

<211> 198

<212> PRT

<213> Arabidopsis thaliana

<400> 1474

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Leu Ser Val Thr Ser Pro Val Lys Pro Ala Glu Asn Pro Cys Leu Val  
35 40 45

Leu Ala Lys Leu Lys Arg Trp Glu Arg Lys Glu Cys Lys Pro Asn Ser  
50 55 60

Leu Pro Ile Leu His Lys Met His Val Lys Phe Gly Asp Thr Val Lys  
65 70 75 80

Val Ile Ser Gly Arg Asp Lys Gly Lys Ile Gly Glu Val Thr Lys Ile  
85 90 95

Phe Thr His Asn Ser Thr Ile Val Ile Lys Asp Val Asn Leu Lys Thr  
100 105 110

Lys His Met Lys Ser Arg Glu Glu Gly Glu Pro Gly Gln Ile Val Lys  
115 120 125

Ile Glu Ala Pro Ile His Ser Ser Asn Val Met Leu Tyr Ser Lys Glu  
130 135 140

Lys Asp Val Val Ser Arg Val Gly His Lys Val Leu Glu Asp Gly Gln  
145 150 155 160

Lys Val Arg Tyr Leu Ile Lys Thr Gly Glu Leu Ile Asp Thr Ile Glu  
165 170 175 180 185 190 195 200

Lys Trp Lys Leu Leu Lys Glu Ala Lys Asp Lys Glu Thr Thr Gln Val  
180 185 190

Ala Val Thr Ser Ala Ser  
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<211> 573

<212> DNA

<213> Arabidopsis thaliana

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caacacggtc gacatgagtt tctagagagt atcgggtatca actgcgcaga agtagcacgt 300  
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<210> 1476

<211> 190

<212> PRT

<213> Arabidopsis thaliana

<400> 1476

Met Phe Leu Gln Val Thr Gly Thr Ala Thr Pro Ala Met Pro Ala Val  
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Val Lys Thr Phe Lys Pro Leu Ala Phe Phe Asp Leu Lys Gly Gly Lys  
 35 40 45

Gly Met Ser Glu Phe His Glu Val Glu Leu Lys Val Arg Asp Tyr Glu  
 50 55 60

Leu Asp Gln Phe Gly Val Val Asn Asn Ala Val Tyr Ala Asn Tyr Cys  
 65 70 75 80

Gln His Gly Arg His Glu Phe Leu Glu Ser Ile Gly Ile Asn Cys Asp  
 85 90 95

Glu Val Ala Arg Ser Gly Glu Ala Leu Ala Ile Ser Glu Leu Thr Met  
 100 105 110

Lys Phe Leu Ser Pro Leu Arg Ser Gly Asp Lys Phe Val Val Lys Ala  
 115 120 125

Arg Ile Ser Gly Thr Ser Ala Ala Arg Ile Tyr Phe Asp His Phe Ile  
 130 135 140

Phe Lys Leu Pro Asn Gln Glu Pro Ile Leu Glu Ala Lys Gly Ile Ala  
 145 150 155 160

Val Trp Leu Asp Asn Lys Tyr Arg Pro Val Arg Ile Pro Ser Ser Ile  
 165 170 175

Arg Ser Lys Phe Val His Phe Leu Arg Gln Asp Asp Ala Val  
 180 185 190

<210> 1477

<211> 2334

<212> DNA

<213> Arabidopsis thaliana

<400> 1477

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2334

&lt;210&gt; 1478

&lt;211&gt; 777

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1478

Met Ala Lys Leu Ser Leu Ser Ser Ile Phe Phe Val Phe Pro Leu Leu  
1 5 10 15Leu Cys Phe Phe Ser Pro Ser Ser Ser Ser Ser Asp Gly Leu Glu Ser  
20 25 30Tyr Ile Val His Val Gln Arg Ser His Lys Pro Ser Leu Phe Ser Ser  
35 40 45His Asn Asn Trp His Val Ser Leu Leu Arg Ser Leu Pro Ser Ser Pro  
50 55 60Gln Pro Ala Thr Leu Leu Tyr Ser Tyr Ser Arg Ala Val His Gly Phe  
65 70 75 80Ser Ala Arg Leu Ser Pro Ile Gln Thr Ala Ala Leu Arg Arg His Pro  
85 90 95Ser Val Ile Ser Val Ile Pro Asp Gln Ala Arg Glu Ile His Thr Thr  
100 105 110His Thr Pro Ala Phe Leu Gly Phe Ser Gln Asn Ser Gly Leu Trp Ser  
115 120 125Asn Ser Asn Tyr Gly Glu Asp Val Ile Val Gly Val Leu Asp Thr Gly  
130 135 140Ile Trp Pro Glu His Pro Ser Phe Ser Asp Ser Gly Leu Gly Pro Ile  
145 150 155 160Pro Ser Thr Trp Lys Gly Glu Cys Glu Ile Gly Pro Asp Phe Pro Ala  
165 170 175Ser Ser Cys Asn Arg Lys Leu Ile Gly Ala Arg Ala Phe Tyr Arg Gly  
180 185 190

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Tyr Leu Thr Gln Arg Asn Gly Thr Lys Lys His Ala Ala Lys Glu Ser  
 195 200 205  
 Arg Ser Pro Arg Asp Thr Glu Gly His Gly Thr His Thr Ala Ser Thr  
 210 215  
 Ala Ala Gly Ser Val Val Ala Asn Ala Ser Leu Tyr Gln Tyr Ala Arg  
 225 230 235 240  
 Gly Thr Ala Thr Gly Met Ala Ser Lys Ala Arg Ile Ala Ala Tyr Lys  
 245 250 255  
 Ile Cys Trp Thr Gly Gly Cys Tyr Asp Ser Asp Ile Leu Ala Ala Met  
 260 265 270  
 Asp Gln Ala Val Ala Asp Gly Val His Val Ile Ser Leu Ser Val Gly  
 275 280 285  
 Ala Ser Gly Ser Ala Pro Glu Tyr His Thr Asp Ser Ile Ala Ile Gly  
 290 295 300  
 Ala Phe Gly Ala Thr Arg His Gly Ile Val Val Ser Cys Ser Ala Gly  
 305 310 315 320  
 Asn Ser Gly Pro Asn Pro Glu Thr Ala Thr Asn Ile Ala Pro Trp Ile  
 325 330 335  
 Leu Thr Val Gly Ala Ser Thr Val Asp Arg Glu Phe Ala Ala Asn Ala  
 340 345 350  
 Ile Thr Gly Asp Gly Lys Val Phe Thr Gly Thr Ser Leu Tyr Ala Gly  
 355 360 365  
 Glu Ser Leu Pro Asp Ser Gln Leu Ser Leu Val Tyr Ser Gly Asp Cys  
 370 375 380  
 Gly Ser Arg Leu Cys Tyr Pro Gly Lys Leu Asn Ser Ser Leu Val Glu  
 385 390 395 400  
 Gly Lys Ile Val Leu Cys Asp Arg Gly Gly Asn Ala Arg Val Glu Lys  
 405 410 415  
 Gly Ser Ala Val Lys Leu Ala Gly Gly Ala Gly Met Ile Leu Ala Asn  
 420 425 430  
 Thr Ala Glu Ser Gly Glu Glu Leu Thr Ala Asp Ser His Leu Val Pro  
 435 440 445



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Ala Thr Met Val Gly Ala Lys Ala Gly Asp Gln Ile Arg Asp Tyr Ile  
450 455 460

Lys Thr Ser Asp Ser Pro Thr Ala Lys Ile Ser Phe Leu Gly Thr Leu  
465 470 475 480

Ile Gly Pro Ser Pro Pro Ser Pro Arg Val Ala Ala Phe Ser Ser Arg  
485 490 495

Gly Pro Asn His Leu Thr Pro Val Ile Leu Lys Pro Asp Val Ile Ala  
500 505 510

Pro Gly Val Asn Ile Leu Ala Gly Trp Thr Gly Met Val Gly Pro Thr  
515 520 525

Asp Leu Asp Ile Asp Pro Arg Arg Val Gln Phe Asn Ile Ile Ser Gly  
530 535 540

Thr Ser Met Ser Cys Pro His Val Ser Gly Leu Ala Ala Leu Leu Arg  
545 550 555 560

Lys Ala His Pro Asp Trp Ser Pro Ala Ala Ile Lys Ser Ala Leu Val  
565 570 575

Thr Thr Ala Tyr Asp Val Glu Asn Ser Gly Glu Pro Ile Glu Asp Leu  
580 585 590

Ala Thr Gly Lys Ser Ser Asn Ser Phe Ile His Gly Ala Gly His Val  
595 600 605

Asp Pro Asn Lys Ala Leu Asn Pro Gly Leu Val Tyr Asp Ile Glu Val  
610 615 620

Lys Glu Tyr Val Ala Phe Leu Cys Ala Val Gly Tyr Glu Phe Pro Gly  
625 630 635 640

Ile Leu Val Phe Leu Gln Asp Pro Thr Leu Tyr Asp Ala Cys Glu Thr  
645 650 655

Ser Lys Leu Arg Thr Ala Gly Asp Leu Asn Tyr Pro Ser Phe Ser Val  
660 665 670

Val Phe Ala Ser Thr Gly Glu Val Val Lys Tyr Lys Arg Val Val Lys  
675 680 685

Asn Val Gly Ser Asn Val Asp Ala Val Tyr Glu Val Gly Val Lys Ser  
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695

Pro Ala Asn Val Glu Ile Asp Val Ser Pro Ser Lys Leu Ala Phe Ser  
705 710 715 720

Lys Glu Lys Ser Val Leu Glu Tyr Glu Val Thr Phe Lys Ser Val Val  
725 730 735

Leu Gly Gly Gly Val Gly Ser Val Pro Gly His Glu Phe Gly Ser Ile  
740 745 750

Glu Trp Thr Asp Gly Glu His Val Val Lys Ser Pro Val Ala Val Gln  
755 760 765

Trp Gly Gln Gly Ser Val Gln Ser Phe  
770 775

&lt;210&gt; 1479

&lt;211&gt; 753

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1479

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&lt;210&gt; 1480

&lt;211&gt; 250

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1480

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20 25 30Ser Val Phe Pro Pro Pro Lys Gln Gln Ser Lys Leu Tyr Gln Val Lys  
35 40 45Ala Met Gly Lys Phe Asn Leu Trp Glu Val Met Gly Gly Arg Gly Leu  
50 55 60Cys Asn Gly Glu Lys Gly Ile Glu Lys Glu Leu Gln Arg Asn Ile Glu  
65 70 75 80Asp Glu Gln Glu Thr Ser Lys Ala Glu Asn Asn Glu Thr Glu Arg Glu  
85 90 95Ser Asp Asp Ser Asn Leu Ser Phe Lys Val Pro Glu Asp Gly Phe Glu  
100 105 110Lys Glu Met Met Gly Leu Thr Gly Gly Phe Pro Gly Gly Glu Lys Gly  
115 120 125Leu Lys Thr Phe Ile Glu Lys Asn Pro Pro Pro Pro Pro Pro Pro  
130 135 140Pro Ala Lys Gln Gly Ser Asp Ala Ser Ala Val Ala Thr Asp Lys Lys  
145 150 155 160Pro Lys Ala Pro Lys Leu Pro Leu Leu Met Pro Gly Met Ile Ala Ile  
165 170 175Val Lys Asn Gln Asn Ser Pro Tyr His Met Tyr Cys Gly Ile Val Gln  
180 185 190Arg Ile Thr Asp Gly Lys Ala Gly Val Leu Phe Glu Gly Gly Asn Trp  
195 200 205Asp Arg Leu Ile Thr Phe Arg Leu Glu Glu Leu Glu Arg Arg Glu Lys  
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210

215

Gly Pro Pro Gly Lys Asn Pro Lys Ser Cys Ile Leu Glu Pro Leu Ile  
 225 230 240

Glu Gln Met Gln Lys Glu Glu Ala Ala Pro  
 245 250

&lt;210&gt; 1481

&lt;211&gt; 1086

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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 ctgggacaga tgtatgagct ctctattgag cttagcatcc atctcaagggt taatcttatg 300  
 ggatacgatt actccgggta tggacaatct actggaaagc cgagtgaaca taacacgtat 360  
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 agcgttgacc agattgagag ggggaggaag agtgtggata ggttggatag agttcgctcc 1080  
 gagtaa 1086

&lt;210&gt; 1482

&lt;211&gt; 361

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1482

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Pro Ser Pro Pro Ser Tyr Lys Val Val Thr Asp Glu Leu Thr Gly Leu  
 20 25 30

Leu Leu Leu Ser Pro Phe Pro His Arg Glu Asn Val Glu Ile Val Lys  
 35 40 45

Leu Arg Thr Arg Arg Gly Thr Glu Ile Val Gly Met Tyr Val Arg His  
 50 55 60

Pro Met Ala Thr Ser Thr Leu Leu Tyr Ser His Gly Asn Ala Ala Asp  
 65 70 75 80

Leu Gly Gln Met Tyr Glu Leu Phe Ile Glu Leu Ser Ile His Leu Lys  
 85 90 95

Val Asn Leu Met Gly Tyr Asp Tyr Ser Gly Tyr Gly Gln Ser Thr Gly  
 100 105 110

Lys Pro Ser Glu His Asn Thr Tyr Ala Asp Ile Glu Ala Val Tyr Lys  
 115 120 125

Cys Leu Glu Glu Thr Phe Gly Ser Lys Gln Glu Gly Val Ile Leu Tyr  
 130 135 140

Gly Gln Ser Val Gly Ser Gly Pro Thr Leu Asp Leu Ala Ser Arg Leu  
 145 150 155 160

Pro Gln Leu Arg Ala Val Val Leu His Ser Pro Ile Leu Ser Gly Leu  
 165 170 175

Arg Val Met Tyr Ser Val Lys Lys Thr Tyr Trp Phe Asp Ile Tyr Lys  
 180 185 190

Asn Ile Asp Lys Ile Pro Tyr Val Asp Cys Pro Val Leu Ile Ile His  
 195 200 205

Gly Thr Ser Asp Glu Val Val Asp Cys Ser His Gly Lys Gln Leu Trp  
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210

215

220

Glu Leu Cys Lys Asp Lys Tyr Glu Pro Leu Trp Val Lys Gly Gly Asn  
 225 230 235 240

His Cys Asp Leu Glu His Tyr Pro Glu Tyr Ile Arg His Leu Lys Lys  
 245 250 255

Phe Ile Ala Thr Val Glu Arg Leu Pro Cys Pro Arg Met Ser Ser Asp  
 260 265 270

Gln Ser Glu Arg Val Arg Asp Ala Pro Pro Arg Arg Ser Met Asp Arg  
 275 280 285

Arg Val Lys Pro Arg Gln Ser Thr Glu Arg Arg Glu Lys Glu Lys Pro  
 290 295 300

Pro Lys Ser Gln Ser Lys Met Ser Ser Ser Ser Ser Lys Leu Lys Ile  
 305 310 315 320

Ser Phe Asp Gln Leu Asp Arg Ser Arg Arg Ser Val Asp Cys His Glu  
 325 330 335

Lys Thr Arg Lys Ser Val Asp Gln Ile Glu Arg Gly Arg Lys Ser Val  
 340 345 350

Asp Arg Leu Asp Arg Val Arg Ser Glu  
 355 360

&lt;210&gt; 1483

&lt;211&gt; 522

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1483

atgggtttta gagcactgcc tcttcaacac agcagtgagg tcatctccac gaccaaagta 60  
 tccatctcaa gaacctcgcc caggattttc cggaacccta gatgggtcgt tgtctcagca 120  
 aagcaagaga aagatgagga taagaagaag aatgaagagg agacttcgtt gtttactcaa 180  
 ttaacggatg ccttggactt ctacaagtt cgatcgaga aagacgctga gcttctctac 240  
 gaggtctcag aagccaccaa atctggtcgc aagatgaccc aagaacagta tggggcattg 300  
 aggagaaaaa tcggagggaac atacaaggac ttttttaaat cctacgttga agtggatggg 360  
 caatatgtgg aggagggatg ggtggacaaa acatgtaaga tatgcaaaaa ggacacaaag 420

ggtgagggcaa gacaagtgga caagttaggg agatatgctc atgtctcttg tcttcaaaat 480  
 cctccctctg gaaatttctt caccagactc ttctctagat ga 522

<210> 1484

<211> 173

<212> PRT

<213> Arabidopsis thaliana

<400> 1484

Met Gly Phe Arg Ala Leu Pro Leu Gln His Ser Ser Gly Phe Ile Ser  
 1 5 10 15

Thr Thr Lys Val Ser Ile Ser Arg Thr Ser Pro Arg Ile Phe Arg Asn  
 20 25 30

Pro Arg Trp Val Val Val Ser Ala Lys Gln Glu Lys Asp Glu Asp Lys  
 35 40 45

Lys Lys Asn Glu Glu Glu Thr Ser Leu Phe Thr Gln Leu Thr Asp Ala  
 50 55 60

Leu Asp Phe Ser Gln Val Arg Ser Glu Lys Asp Ala Glu Leu Leu Tyr  
 65 70 75 80

Glu Ala Arg Glu Ala Thr Lys Ser Gly Arg Lys Met Thr Gln Glu Gln  
 85 90 95

Tyr Gly Ala Leu Arg Arg Lys Ile Gly Gly Thr Tyr Lys Asp Phe Phe  
 100 105 110

Lys Ser Tyr Val Glu Val Asp Gly Gln Tyr Val Glu Glu Gly Trp Val  
 115 120 125

Asp Lys Thr Cys Lys Ile Cys Lys Lys Asp Thr Lys Gly Glu Ala Arg  
 130 135 140

Gln Val Asp Lys Leu Gly Arg Tyr Ala His Val Ser Cys Leu Gln Asn  
 145 150 155 160

Pro Pro Ser Gly Asn Phe Phe Thr Arg Leu Phe Ser Arg  
 165 170

<210> 1485

&lt;211&gt; 1185

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1485

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gagaagaaat ctccgagtaa actacacaac tgtcttggtt gtttgggtcc ggaagacaat    180
gtggcagatt attaccagca gcaagtagag atgcttgagg gctttactga aatggatgaa    240
cttgcagaac gtggctttgt tcctggaatg tcaaaggaag agcaggataa tttggctaaa    300
agcgagacat tggcgattag aatatcaaac attgcaaaca tgcttctttt tgcgtctaaa    360
gtctatgctt ctgtcactag tggctcttta gctatcattg cctctacatt ggactctctt    420
cttgatcttc tttctggctt catcctctgg ttaccgcct tctccatgca gacaccaaac    480
ccgtatcagt atcccattgg caagaaacgc atgcaaccac tgggaatcct agtctttgca    540
tcagtgatgg caacacttgg attgcagatt atcttggaaat ctcttcgcac aatgttatcc    600
agccacaagg agttcaacct aacaaaagag caagagagtt gggtagttgg gatcatgctt    660
tctgttcat tggtcaaact gcttctgggt ctttactgca gatccttcac taacgagatc    720
gttaaagctt atgctcaaga tcatttcttc gacgtcatca caaacatcat tggactcatt    780
gcagtaatcc tggccaatta cattgattat tggattgac cagttggagc tatcattctt    840
gcattatata caatacggac atgggtcaatg acggtcttgg agaacgttaa ctctcttggt    900
gggaaatcag ctagaccaga gtatctgcag aaactaactt acctgtgttg gaaccaccat    960
aaagccatta ggcacattga cacagtgagg gcatacacat ttggctctca tttattttgtg   1020
gaggttgata ttgttctccc agctgacatg cctctgcaag tggctcaca cattggagaa   1080
tcgctgcaag agaagctcga gctactagag gagatcgaa gggcttttgt gcatcttgat   1140
tatgagtaca ctcaacaacc tgagcacgct agatccact gttag                       1185

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&lt;210&gt; 1486

&lt;211&gt; 394

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1486



Met Val Glu Pro Ala Ser Pro Asp Ser Asp Glu Gly Ile Ser Leu Leu  
 1 5 10 15  
 Glu Phe His Gly Asn Gly Asp Arg Ser Trp Gln Leu Asn Phe Asp Asp  
 20 25 30  
 Phe Gln Val Ser Pro Glu His Lys Glu Lys Lys Ser Pro Ser Lys Leu  
 35 40 45  
 His Asn Cys Leu Gly Cys Leu Gly Pro Glu Asp Asn Val Ala Asp Tyr  
 50 55 60  
 Tyr Gln Gln Gln Val Glu Met Leu Glu Gly Phe Thr Glu Met Asp Glu  
 65 70 75 80  
 Leu Ala Glu Arg Gly Phe Val Pro Gly Met Ser Lys Glu Glu Gln Asp  
 85 90 95  
 Asn Leu Ala Lys Ser Glu Thr Leu Ala Ile Arg Ile Ser Asn Ile Ala  
 100 105 110  
 Asn Met Leu Leu Phe Ala Ala Lys Val Tyr Ala Ser Val Thr Ser Gly  
 115 120 125  
 Ser Leu Ala Ile Ile Ala Ser Thr Leu Asp Ser Leu Leu Asp Leu Leu  
 130 135 140  
 Ser Gly Phe Ile Leu Trp Phe Thr Ala Phe Ser Met Gln Thr Pro Asn  
 145 150 155 160  
 Pro Tyr Gln Tyr Pro Ile Gly Lys Lys Arg Met Gln Pro Leu Gly Ile  
 165 170 175  
 Leu Val Phe Ala Ser Val Met Ala Thr Leu Gly Leu Gln Ile Ile Leu  
 180 185 190  
 Glu Ser Leu Arg Thr Met Leu Ser His Lys Glu Phe Asn Leu Thr  
 195 200 205  
 Lys Glu Gln Glu Ser Trp Val Val Gly Ile Met Leu Ser Val Thr Leu  
 210 215 220  
 Val Lys Leu Leu Leu Val Leu Tyr Cys Arg Ser Phe Thr Asn Glu Ile  
 225 230 235 240  
 Val Lys Ala Tyr Ala Gln Asp His Phe Phe Asp Val Ile Thr Asn Ile  
 245 250 255

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Ile Gly Leu Ile Ala Val Ile Leu Ala Asn Tyr Ile Asp Tyr Trp Ile  
260 265 270

Asp Pro Val Gly Ala Ile Ile Leu Ala Leu Tyr Thr Ile Arg Thr Trp  
275 280 285

Ser Met Thr Val Leu Glu Asn Val Asn Ser Leu Val Gly Lys Ser Ala  
290 295 300

Arg Pro Glu Tyr Leu Gln Lys Leu Thr Tyr Leu Cys Trp Asn His His  
305 310 315 320

Lys Ala Ile Arg His Ile Asp Thr Val Arg Ala Tyr Thr Phe Gly Ser  
325 330 335

His Tyr Phe Val Glu Val Asp Ile Val Leu Pro Ala Asp Met Pro Leu  
340 345 350

Gln Val Ala His Asp Ile Gly Glu Ser Leu Gln Glu Lys Leu Glu Leu  
355 360 365

Leu Glu Glu Ile Glu Arg Ala Phe Val His Leu Asp Tyr Glu Tyr Thr  
370 375 380

His Lys Pro Glu His Ala Arg Ser His Cys  
385 390

<210> 1487

<211> 348

<212> DNA

<213> Arabidopsis thaliana

<400> 1487  
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atgccatcat cacagcagga ggaggctgtt gtaagaaga agtatggagg gctcatgccca 120  
aagaaaccac ctctcatttc caaggatcat gagcgagcat actttgactc agctgattgg 180  
gctcttggaag agcaagggtg tgcgaagcca aagggaacccc tggaagccct tcgtcccaag 240  
ttacagccaa cgcagcagca gacacgttac aggaagtctc catgtgctcc atctgagggg 300  
gggtaagatg gaggagctgc tcaggccgag ggaggttcag gcaactga 348

<210> 1488

&lt;211&gt; 115

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1488

Met Ser Ser Ala Glu Asp Val Lys Glu Gln Gly Asn Leu Thr Asn Glu  
 1 5 10 15

Ala Glu Lys Ser Met Pro Ser Ser Gln Gln Glu Glu Ala Val Val Lys  
 20 25 30

Lys Lys Tyr Gly Gly Leu Met Pro Lys Lys Pro Pro Leu Ile Ser Lys  
 35 40 45

Asp His Glu Arg Ala Tyr Phe Asp Ser Ala Asp Trp Ala Leu Gly Lys  
 50 55 60

Gln Gly Val Ala Lys Pro Lys Gly Pro Leu Glu Ala Leu Arg Pro Lys  
 65 70 75 80

Leu Gln Pro Thr Gln Gln Gln Thr Arg Tyr Arg Lys Ser Pro Cys Ala  
 85 90 95

Pro Ser Glu Gly Gly Glu Asp Gly Gly Ala Ala Gln Ala Glu Gly Gly  
 100 105 110

Ser Gly Asn  
 115

&lt;210&gt; 1489

&lt;211&gt; 1047

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1489

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 gcggtggcac cagcggtgca tggacagcaa acgccgtgtt acttcgtgtt tggagactct 120  
 gtcttcgaca acggttaaca caatgccttg aacaccaagg ccaaggtcaa ctattacct 180  
 tatggtatag attactttca aggtccaacc ggtcgggtta gcaacggtcg gaattattcca 240  
 gacgttatcg ctgaactagc gggtttcaat aaccaattc caccatttgc cggagcatca 300

caggcacaag ctaacatcgg actcaactat gcttccggtg ccggcgggtat ccgcaagaa 360  
 accagcgaaa atatgggtga gagaatcagt ttgagacagc aagtaacaa ccacttttcc 420  
 gctatcataa ccgcggcgggt gccactgagt cggttaaggc aatgtctata cacaatcaac 480  
 atcgggaagca acgattacct caacaactac ttcttgctgc ctctactct agctcgctgt 540  
 ctatttaatc ctgaccagta cgctcgatct ctcataagcc tctaccgtat ctatctgacg 600  
 caattgtacg tactaggagc gaggaatgta gcgttggtcg gtatcggtaa gatcggatgt 660  
 acaccacgga ttgttgctac cctcgggtggc ggcactggct gcgcagaaga agtgaaccaa 720  
 gccgtgatca tcttcaacac taaactcaaa gccctagtca cagatttcaa caacaaaccg 780  
 ggagctatgt tcacttatgt tgatctcttc tctggaatg ctgaagattt cgccgctcta 840  
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 gcgaacggac cggtttgtcc agacagaaac aaattcatat tctgggataa cgtgcatact 960  
 acggaagtga taaatactgt ggtggctaac gcagcgttta acggacctat agctagtccg 1020  
 ttcaacatat cccagttagt gaattaa 1047

<210> 1490

<211> 348

<212> PRF

<213> *Arabidopsis thaliana*

<400> 1490

Met Val Glu Gly Glu Ser Lys Ala Leu Trp Ile Ile Leu Ala Thr Val  
1 5 10 15

Phe Ala Val Ala Ala Val Ala Pro Ala Val His Gly Gln Gln Thr Pro  
20 25 30

Cys Tyr Phe Val Phe Gly Asp Ser Val Phe Asp Asn Gly Asn Asn Asn  
35 40 45

Ala Leu Asn Thr Lys Ala Lys Val Asn Tyr Leu Pro Tyr Gly Ile Asp  
50 55 60

Tyr Phe Gln Gly Pro Thr Gly Arg Phe Ser Asn Gly Arg Asn Ile Pro  
65 70 75 80

Asp Val Ile Ala Glu Leu Ala Gly Phe Asn Asn Pro Ile Pro Pro Phe  
85 90 95

Ala Gly Ala Ser Gln Ala Gln Ala Asn Ile Gly Leu Asn Tyr Ala Ser  
 100 105 110

Gly Ala Gly Gly Ile Arg Glu Glu Thr Ser Glu Asn Met Gly Glu Arg  
 115 120 125

Ile Ser Leu Arg Gln Gln Val Asn Asn His Phe Ser Ala Ile Ile Thr  
 130 135 140

Ala Ala Val Pro Leu Ser Arg Leu Arg Gln Cys Leu Tyr Thr Ile Asn  
 145 150 155 160

Ile Gly Ser Asn Asp Tyr Leu Asn Asn Tyr Phe Leu Ser Pro Pro Thr  
 165 170 175

Leu Ala Arg Arg Leu Phe Asn Pro Asp Gln Tyr Ala Arg Ser Leu Ile  
 180 185 190

Ser Leu Tyr Arg Ile Tyr Leu Thr Gln Leu Tyr Val Leu Gly Ala Arg  
 195 200 205

Asn Val Ala Leu Phe Gly Ile Gly Lys Ile Gly Cys Thr Pro Arg Ile  
 210 215 220

Val Ala Thr Leu Gly Gly Gly Thr Gly Cys Ala Glu Glu Val Asn Gln  
 225 230 235 240

Ala Val Ile Ile Phe Asn Thr Lys Leu Lys Ala Leu Val Thr Asp Phe  
 245 250 255

Asn Asn Lys Pro Gly Ala Met Phe Thr Tyr Val Asp Leu Phe Ser Gly  
 260 265 270

Asn Ala Glu Asp Phe Ala Ala Leu Gly Ile Thr Val Gly Asp Arg Ser  
 275 280 285

Cys Cys Thr Val Asn Pro Gly Glu Glu Leu Cys Ala Ala Asn Gly Pro  
 290 295 300

Val Cys Pro Asp Arg Asn Lys Phe Ile Phe Trp Asp Asn Val His Thr  
 305 310 315 320

Thr Glu Val Ile Asn Thr Val Val Ala Asn Ala Ala Phe Asn Gly Pro  
 325 330 335

Ile Ala Ser Pro Phe Asn Ile Ser Gln Leu Val Asn  
 340 345

&lt;210&gt; 1491

&lt;211&gt; 546

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1491

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atggcttct ctatgctctc ctccgccgct gtgggttacat ccccggtca ggccaccatg      60
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aaggacatca cttccatcgc aagcaacggg ggaagagtta gtcgatgaa ggtgtggcca      180
ccaattggaa agaagaagtt tgagactcta tcttacctcc ctgaccttag tgacgtcgaa      240
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ttagagcacg gatttgtgta ccgtgagcac ggaacactc ccgatacta cgatggacgg      360
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gaagtgaag aatgaagaa ggagtaccg gccgccttca ttaggatcat cggattcgac      480
aacaccgctc aagtccaatg catcagtttc attgcctaca agccccaag ctcaccgaa      540
gcttaa                                           546

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&lt;210&gt; 1492

&lt;211&gt; 181

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1492

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Met Ala Ser Ser Met Leu Ser Ser Ala Ala Val Val Thr Ser Pro Ala
1      5      10      15
Gln Ala Thr Met Val Ala Pro Phe Thr Gly Leu Lys Ser Ser Ala Ala
20     25     30
Phe Pro Val Thr Arg Lys Thr Asn Lys Asp Ile Thr Ser Ile Ala Ser
35     40     45
Asn Gly Gly Arg Val Ser Cys Met Lys Val Trp Pro Pro Ile Gly Lys
50     55     60
Lys Lys Phe Glu Thr Leu Ser Tyr Leu Pro Asp Leu Ser Asp Val Glu
65     70     75     80

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Leu Ala Lys Glu Val Asp Tyr Leu Leu Arg Asn Lys Trp Ile Pro Cys  
85 90 95

Val Glu Phe Glu Leu Glu His Gly Phe Val Tyr Arg Glu His Gly Asn  
100 105 110

Thr Pro Gly Tyr Tyr Asp Gly Arg Tyr Trp Thr Met Trp Lys Leu Pro  
115 120 125

Leu Phe Gly Cys Thr Asp Ser Ala Gln Val Leu Lys Glu Val Glu Glu  
130 135 140

Cys Lys Lys Glu Tyr Pro Gly Ala Phe Ile Arg Ile Ile Gly Phe Asp  
145 150 155 160

Asn Thr Arg Gln Val Gln Cys Ile Ser Phe Ile Ala Tyr Lys Pro Pro  
165 170 175

Ser Phe Thr Glu Ala  
180

<210> 1493

<211> 771

<212> DNA

<213> Arabidopsis thaliana

<400> 1493  
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ttgaacagaa caggaaagag ttgcaggcta agatggggtta attacctaca tcctgggtctc 180  
aaacgtggca agatgacgcc tcaagaagag cgccctgtcc ttgagcttca cgctaagtgg 240  
ggaaacaggt ggtcgaaaaa agcccgaataa ttgccgggac gaacggataa cgagataaag 300  
aactactgga ggactcatat gaggaagaaa gctcaagaaa agaagcgctc tgtttcccca 360  
acttctctcat tttccaactg cagctcgta tctgtgacca ctaccaccac caataactcaa 420  
gatacatcgt gccactcgcg taaatcttca ggggaagtga gcttttacga cactggaggt 480  
tcccgatcca ctagagagat gaatcaagaa aacgaagacg tgtactcgtt ggatgatata 540  
tggagagaga ttgatcactc agcagtaaac ataataaac cggttaaaga catctactca 600  
gaacaaagcc attgcttaag ttacccaat ctagcttcac catcatggga aagctcattg 660

gattctatat ggaacatgga tgcagataaa agtaagatat cgtcttactt tgcaaatgat 720  
 cagtttcctt tctgtttcca acacagtaga tcaccatggg cgtcagggtta a 771

<210> 1494

<211> 256

<212> PRT

<213> Arabidopsis thaliana

<400> 1494

Met Met Gln Glu Glu Gly Asn Arg Lys Gly Pro Trp Thr Glu Gln Glu  
 1 5 10 15

Asp Ile Leu Leu Val Asn Phe Val His Leu Phe Gly Asp Arg Arg Trp  
 20 25 30

Asp Phe Ile Ala Lys Val Ser Gly Leu Asn Arg Thr Gly Lys Ser Cys  
 35 40 45

Arg Leu Arg Trp Val Asn Tyr Leu His Pro Gly Leu Lys Arg Gly Lys  
 50 55 60

Met Thr Pro Gln Glu Glu Arg Leu Val Leu Glu Leu His Ala Lys Trp  
 65 70 75 80

Gly Asn Arg Trp Ser Lys Ile Ala Arg Lys Leu Pro Gly Arg Thr Asp  
 85 90 95

Asn Glu Ile Lys Asn Tyr Trp Arg Thr His Met Arg Lys Lys Ala Gln  
 100 105 110

Glu Lys Lys Arg Pro Val Ser Pro Thr Ser Ser Phe Ser Asn Cys Ser  
 115 120 125

Ser Ser Ser Val Thr Thr Thr Thr Thr Asn Thr Gln Asp Thr Ser Cys  
 130 135 140

His Ser Arg Lys Ser Ser Gly Glu Val Ser Phe Tyr Asp Thr Gly Gly  
 145 150 155 160

Ser Arg Ser Thr Arg Glu Met Asn Gln Glu Asn Glu Asp Val Tyr Ser  
 165 170 175

Leu Asp Asp Ile Trp Arg Glu Ile Asp His Ser Ala Val Asn Ile Ile  
 180 185 190



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Lys Pro Val Lys Asp Ile Tyr Ser Glu Gln Ser His Cys Leu Ser Tyr  
195 200 205

Pro Asn Leu Ala Ser Pro Ser Trp Glu Ser Ser Leu Asp Ser Ile Trp  
210 215 220

Asn Met Asp Ala Asp Lys Ser Lys Ile Ser Ser Tyr Phe Ala Asn Asp  
225 230 235 240

Gln Phe Pro Phe Cys Phe Gln His Ser Arg Ser Pro Trp Ser Ser Gly  
245 250 255

<210> 1495

<211> 801

<212> DNA

<213> Arabidopsis thaliana

<400> 1495  
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gcatctgctt ctctccgctc cggatttgct cgacgctctt ccctcagctc cacttctcgt 180  
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gattttgagg cagaggctgt gtttgatcaa gagttcatca aggttaagct ctctgattac 300  
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aagtcgtttc gagtgctcat ccatgatcag ggaatagcac tgagaggact ttctcataatc 600  
gacaaggaag gagtgatcca acattccacc atcaacaatc ttggatttgg ccgaagcggt 660  
gatgagacaa tgagaaccct ccaggcatta cagtacatcc aggaataacc ggaatgaagtc 720  
tgcccagcag gatggaagcc gggtgagaag tcaatgaaac ccgacccaaa actcagcaaa 780  
gagtacttct cagctattta g 801

<210> 1496

<211> 266

<212> PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1496

Met Ala Ser Val Ala Ser Ser Thr Thr Leu Ile Ser Ser Pro Ser Ser  
1 5 10 15Arg Val Phe Pro Ala Lys Ser Ser Leu Ser Ser Pro Ser Val Ser Phe  
20 25 30Leu Arg Thr Leu Ser Ser Pro Ser Ala Ser Ala Ser Leu Arg Ser Gly  
35 40 45Phe Ala Arg Arg Ser Ser Leu Ser Ser Thr Ser Arg Arg Ser Phe Ala  
50 55 60Val Lys Ala Gln Ala Asp Asp Leu Pro Leu Val Gly Asn Lys Ala Pro  
65 70 75 80Asp Phe Glu Ala Glu Ala Val Phe Asp Gln Glu Phe Ile Lys Val Lys  
85 90 95Leu Ser Asp Tyr Ile Gly Lys Lys Tyr Val Ile Leu Phe Phe Tyr Pro  
100 105 110Leu Asp Phe Thr Phe Val Cys Pro Thr Glu Ile Thr Ala Phe Ser Asp  
115 120 125Arg His Ser Glu Phe Glu Lys Leu Asn Thr Glu Val Leu Gly Val Ser  
130 135 140Val Asp Ser Val Phe Ser His Leu Ala Trp Val Gln Thr Asp Arg Lys  
145 150 155 160Ser Gly Gly Leu Gly Asp Leu Asn Tyr Pro Leu Ile Ser Asp Val Thr  
165 170 175Lys Ser Ile Ser Lys Ser Phe Gly Val Leu Ile His Asp Gln Gly Ile  
180 185 190Ala Leu Arg Gly Leu Phe Ile Ile Asp Lys Glu Gly Val Ile Gln His  
195 200 205Ser Thr Ile Asn Asn Leu Gly Ile Gly Arg Ser Val Asp Glu Thr Met  
210 215 220

Arg Thr Leu Gln Ala Leu Gln Tyr Ile Gln Glu Asn Pro Asp Glu Val  
 225 230 235 240

Cys Pro Ala Gly Trp Lys Pro Gly Glu Lys Ser Met Lys Pro Asp Pro  
 245 250 255

Lys Leu Ser Lys Glu Tyr Phe Ser Ala Ile  
 260 265

<210> 1497

<211> 648

<212> DNA

<213> Arabidopsis thaliana

<400> 1497  
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 gaaagtact acgttctccc tgtcatccgt ggccgagcgc gaggcctgac tctagcaggc 180  
 cgcggtgggc agccatgtcc ttacgatatc gtcaggaat cttcagaagt tgatgagggc 240  
 attcccgtaa aattctcaaa ctggaggcct aaggttgctg tcgttcccg atcacagaac 300  
 ctcaacatcg aaacagacgt cggagccacg atctgcattc agtcaacctt ctggcgggtc 360  
 ggtgagtttg accacgagag gaagcagtac ttcgtggttg ctgggtccaaa gccagaaggg 420  
 ttcggacaag attcgttgaa gaggttcttc aagatcgaga aatctggaga ggatgcttac 480  
 aagtttgtgt tctgtcctcg gacttgcgac tctggcaatc caaaatgcag cgatgtcggg 540  
 atattcatag atgaacttgg cgttcgtcgt ttggctttaa gcgataagcc gttcttggtt 600  
 atgttcaaaa aagctaagt gaccgaagtt tcgtccaaga ctatgtga 648

<210> 1498

<211> 215

<212> PRT

<213> Arabidopsis thaliana

<400> 1498

Met Thr Lys Thr Thr Lys Thr Met Asn Pro Lys Phe Tyr Leu Val Leu  
 1 5 10 15

Ala Leu Thr Ala Val Leu Ala Ser Asn Ala Tyr Gly Ala Val Val Asp  
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Ile Asp Gly Asn Ala Met Phe His Glu Ser Tyr Tyr Val Leu Pro Val  
35 40 45

Ile Arg Gly Arg Gly Gly Leu Thr Leu Ala Gly Arg Gly Gly Gln  
50 55 60

Pro Cys Pro Tyr Asp Ile Val Gln Glu Ser Ser Glu Val Asp Glu Gly  
65 70 75 80

Ile Pro Val Lys Phe Ser Asn Trp Arg Leu Lys Val Ala Phe Val Pro  
85 90 95

Glu Ser Gln Asn Leu Asn Ile Glu Thr Asp Val Gly Ala Thr Ile Cys  
100 105 110

Ile Gln Ser Thr Tyr Trp Arg Val Gly Glu Phe Asp His Glu Arg Lys  
115 120 125

Gln Tyr Phe Val Val Ala Gly Pro Lys Pro Glu Gly Phe Gly Gln Asp  
130 135 140

Ser Leu Lys Ser Phe Phe Lys Ile Glu Lys Ser Gly Glu Asp Ala Tyr  
145 150 155 160

Lys Phe Val Phe Cys Pro Arg Thr Cys Asp Ser Gly Asn Pro Lys Cys  
165 170 175

Ser Asp Val Gly Ile Phe Ile Asp Glu Leu Gly Val Arg Arg Leu Ala  
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Leu Ser Asp Lys Pro Phe Leu Val Met Phe Lys Lys Ala Asn Val Thr  
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Glu Val Ser Ser Lys Thr Met  
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<211> 1092

<212> DNA

<213> Arabidopsis thaliana

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<213> Arabidopsis thaliana

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20 25 30

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35 40 45

Ala Lys Asn Gly Ser Pro Met Ser Pro Thr Glu Ile Ala Ser Lys Leu  
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50

55

60

Pro Thr Lys Asn Pro Glu Ala Pro Val Met Leu Asp Arg Ile Leu Arg  
 65 70 75 80  
 Leu Leu Thr Ser Tyr Ser Val Leu Thr Cys Ser Asn Arg Lys Leu Ser  
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 Gly Asp Gly Val Glu Arg Ile Tyr Gly Leu Gly Pro Val Cys Lys Tyr  
 100 105 110  
 Leu Thr Lys Asn Glu Asp Gly Val Ser Ile Ala Ala Leu Cys Leu Met  
 115 120 125  
 Asn Gln Asp Lys Val Leu Met Glu Ser Trp Tyr His Leu Lys Asp Ala  
 130 135 140  
 Ile Leu Asp Gly Gly Ile Pro Phe Asn Lys Ala Tyr Gly Met Ser Ala  
 145 150 155 160  
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 Gly Met Ser Asn His Ser Thr Ile Thr Met Lys Lys Ile Leu Glu Thr  
 180 185 190  
 Tyr Lys Gly Phe Glu Gly Leu Thr Ser Leu Val Asp Val Gly Gly Gly  
 195 200 205  
 Ile Gly Ala Thr Leu Lys Met Ile Val Ser Lys Tyr Pro Asn Leu Lys  
 210 215 220  
 Gly Ile Asn Phe Asp Leu Pro His Val Ile Glu Asp Ala Pro Ser His  
 225 230 235 240  
 Pro Gly Ile Glu His Val Gly Gly Asp Met Phe Val Ser Val Pro Lys  
 245 250 255  
 Gly Asp Ala Ile Phe Met Lys Trp Ile Cys His Asp Trp Ser Asp Glu  
 260 265 270  
 His Cys Val Lys Phe Leu Lys Asn Cys Tyr Glu Ser Leu Pro Glu Asp  
 275 280 285  
 Gly Lys Val Ile Leu Ala Glu Cys Ile Leu Pro Glu Thr Pro Asp Ser  
 290 295 300

Ser Leu Ser Thr Lys Gln Val Val His Val Asp Cys Ile Met Leu Ala  
 305 310 315 320

His Asn Pro Gly Gly Lys Glu Arg Thr Glu Lys Glu Phe Glu Ala Leu  
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<213> Arabidopsis thaliana

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<211> 123

<212> PRT

<213> Arabidopsis thaliana

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Glu Ser Leu His Gln Phe Gln Glu Val Lys Val Glu Lys Ile Gly Glu  
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35

40

45

Met Phe Gln Val Lys Ile Lys Ser Pro Arg Gly Glu Asn Asn Leu Val  
 50 55 60

Asn Ile Leu Glu Ala Phe Glu Glu Met Gly Leu Asn Val Ala Gln Ala  
 65 70 75 80

Arg Ala Ser Cys Leu Asp Ser Phe Ala Met Glu Ala Ile Val Ala Pro  
 85 90 95

Gln Ser Lys Asp Lys Leu Cys Ser Val Asp Asp Leu Thr Gln Thr Leu  
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Val Lys Ala Leu Val Lys Pro Ser Val Pro Leu  
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&lt;211&gt; 594

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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&lt;210&gt; 1504

&lt;211&gt; 197

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana



&lt;400&gt; 1504

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 20 25 30

Glu Arg Arg Phe Asn Phe Glu Val Val Ser Gln Lys Lys Ala Lys Lys  
 35 40 45

Leu Arg Lys Val Ile Leu Lys Glu Asp Val Thr Asp Leu Gly Lys Gln  
 50 55 60

Gly Gln Leu Leu Asp Val Lys Ala Gly Phe Phe Arg Asn Phe Leu Leu  
 65 70 75 80

Pro Thr Gly Lys Ala Gln Leu Met Thr Pro Leu Leu Leu Lys Glu Leu  
 85 90 95

Lys Met Glu Asp Glu Arg Ile Glu Ala Glu Lys Gln Arg Val Lys Glu  
 100 105 110

Glu Ala Gln Gln Leu Ala Met Val Phe Gln Thr Val Gly Ala Phe Lys  
 115 120 125

Val Lys Arg Lys Gly Gly Lys Gly Lys Leu Ile Phe Gly Ser Val Thr  
 130 135 140

Ala Gln Asp Leu Val Asp Ile Ile Lys Ser Gln Leu Gln Lys Asp Ile  
 145 150 155 160

Asp Lys Arg Leu Val Ser Leu Pro Glu Ile Arg Glu Thr Gly Glu Tyr  
 165 170 175

Ile Ala Glu Leu Lys Leu His Pro Asp Val Thr Ala Arg Val Lys Ile  
 180 185 190

Asn Val Phe Ala Asn  
 195

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&lt;211&gt; 906

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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 actaagatgc ttaaagaaac ttgaaatgg agagttcaat acaaacctga ggagatttgt 240  
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<211> 301

<212> PRT

<213> Arabidopsis thaliana

<400> 1506

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 35 40 45

Tyr Leu Arg Ala Arg Asn Trp His Val Lys Lys Ala Thr Lys Met Leu  
 50 55 60

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Lys Glu Thr Leu Lys Trp Arg Val Gln Tyr Lys Pro Glu Glu Ile Cys  
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 Ser Cys Val Asp Lys Leu Gly Arg Pro Val Leu Ile Met Arg Pro Ser  
 100 105 110  
 Val Glu Asn Ser Lys Ser Val Lys Gly Gln Ile Arg Tyr Leu Val Tyr  
 115 120 125  
 Cys Met Glu Asn Ala Val Gln Asn Leu Pro Pro Gly Glu Glu Gln Met  
 130 135 140  
 Val Trp Met Ile Asp Phe His Gly Tyr Ser Leu Ala Asn Val Ser Leu  
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 Arg Thr Thr Lys Glu Thr Ala His Val Leu Gln Glu His Tyr Pro Glu  
 165 170 175  
 Arg Leu Ala Phe Ala Val Leu Tyr Asn Pro Pro Lys Phe Phe Glu Pro  
 180 185 190  
 Phe Trp Lys Val Ala Arg Pro Phe Leu Glu Pro Lys Thr Arg Asn Lys  
 195 200 205  
 Val Lys Phe Val Tyr Ser Asp Asp Pro Asn Thr Lys Val Ile Met Glu  
 210 215 220  
 Glu Asn Phe Asp Met Glu Lys Met Glu Leu Ala Phe Gly Gly Asn Asp  
 225 230 235  
 Asp Ser Gly Phe Asn Ile Glu Lys His Ser Glu Arg Met Lys Glu Asp  
 245 250 255  
 Asp Lys Lys Arg Leu Ala Ser Leu Glu Gly Ile Val Ser Ala Ser Leu  
 260 265 270  
 Asp Ser Leu Ser Ile Leu Ser Val Ser Asp Gly Thr Ala Ser Asn Ser  
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 290 295 300

<210> 1507

&lt;211&gt; 1068

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1507

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&lt;210&gt; 1508

&lt;211&gt; 355

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1508

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 Ala Pro Ala Pro Pro Pro Pro Gln Glu Val Val Leu Lys Val Tyr  
 65 70 75 80  
 Met His Cys Glu Gly Cys Ala Arg Lys Val Arg Arg Cys Leu Lys Gly  
 85 90 95  
 Phe Glu Gly Val Glu Asp Val Met Thr Asp Cys Lys Thr Gly Lys Val  
 100 105 110  
 Val Val Lys Gly Glu Lys Ala Asp Pro Leu Lys Val Leu Ala Arg Val  
 115 120 125  
 Gln Arg Lys Thr His Arg Gln Val Gln Leu Leu Ser Pro Ile Pro Pro  
 130 135 140  
 Pro Pro Pro Pro Pro Glu Lys Lys Ala Glu Glu Asp Lys Pro Ile Val  
 145 150 155 160  
 Glu Glu Lys Lys Val Glu Pro Pro Val Val Val Thr Val Val Leu Lys  
 165 170 175  
 Val His Met His Cys Glu Ala Cys Ala Thr Glu Ile Lys Lys Arg Ile  
 180 185 190  
 Met Arg Met Lys Gly Val Glu Ser Ala Glu Ser Asp Leu Lys Ser Ser  
 195 200 205  
 Gln Val Thr Val Lys Gly Val Phe Glu Pro Gln Lys Leu Val Glu Tyr  
 210 215 220  
 Val Tyr Lys Arg Thr Gly Lys His Ala Ala Ile Met Lys Ile Asp Pro  
 225 230 235 240  
 Pro Pro Pro Pro Pro Glu Glu Ala Ala Ala Ala Glu Gly Glu  
 245 250 255  
 Lys Lys Glu Glu Glu Lys Gly Glu Gly Glu Ser Lys Gly Glu Glu Gly  
 260 265 270

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Lys Asp Asp Lys Lys Thr Asp Glu Glu Lys Lys Glu Gly Asp Gly  
275 280 285

Gly Lys Gly Glu Gly Glu Ala Ala Asp Asn Gly Gly Gly Glu Glu Glu  
290 295 300

Gly Lys Val Val Glu Val Arg Lys Ile Glu Asn Pro Tyr Tyr Tyr Tyr  
305 310 315 320

Tyr Tyr Gln Pro Pro Arg Val Ala Ile Pro Pro Met Glu Met Pro Pro  
325 330 335

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Thr Val Met  
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<211> 921

<212> DNA

<213> Arabidopsis thaliana

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<211> 306

<212> PRT

<213> Arabidopsis thaliana

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 20 25 30

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 35 40 45

Ser Glu Lys Pro Asn Arg Lys Lys Ile Gln Lys Gly Lys Glu Ile Lys  
 50 55 60

Ser Ser Pro Ala Asp Gly Lys Leu Ser Gly Lys Met Lys Lys Arg Lys  
 65 70 75 80

Glu Lys Val Gly Asn Val Asp Ile Ser Glu Pro Ile Leu Glu Ala Ile  
 85 90 95

Ser Thr Glu Lys Val Lys Glu Lys Lys Gly Lys Met Asn Lys Thr Lys  
 100 105 110

Lys Lys Arg Lys Ala Glu Glu Ile Thr Arg Ser Ser Val Glu Asp Leu  
 115 120 125

Lys Arg Glu Ser Lys Phe Lys Lys Ser Asn Lys Lys Lys Lys Met Asp  
 130 135 140

Met Thr Ser Lys Lys Glu Asn Lys Ile Glu Glu Glu Glu Asp Val Tyr  
 145 150 155 160

Gln Ile Ser Ser Gly Asp Glu Asp Cys Thr Arg Gly Met Lys Lys Trp  
 165 170 175

Val Ser Asp Tyr Tyr Glu Gly Arg Pro Gly Leu Asp Glu Leu Gln Lys  
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Arg Ile Asp Asp Phe Met Thr Ala His Glu Glu Arg Leu Glu Gln Glu  
195 200 205

Lys Gln Asp Lys Glu Ala Lys Ala Ala Glu Gly Gly Trp Thr Val Val  
210 215 220

Val His His Lys Gly Arg Lys Lys Thr Thr Glu Ser Glu Thr Gly Thr  
225 230 235 240

Ala Val Gly Ser Phe Ser Gln Ala Ala Leu Glu Asp Lys Ile Ala Lys  
245 250 255

Lys Lys Gln Ser Glu Pro Val Ala His Gly Phe Tyr Arg Phe Gln Arg  
260 265 270

Arg Asp Ala Gln Arg Asn Glu Leu Leu Ala Leu Gln Ser Lys Phe Glu  
275 280 285

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Pro Phe  
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<211> 256

<212> PRT

<213> Arabidopsis thaliana

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 20 25 30

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 35 40 45

Thr Ser Leu Thr Gln Asn Asn Ala Ala Glu Ile Glu Leu Lys Tyr Leu  
 50 55 60

Val Ser Gln His Gly Trp Asp Val Arg Arg Leu Asn Arg Asp Asp Glu  
 65 70 75 80

Asp Glu Ile Arg Arg Val Ser Leu Val Gln Ala Glu Ala Phe His Ile  
 85 90 95

Pro Leu Ala Leu Phe Asp Asp Phe Phe Met Phe Phe Gln Ala Glu  
 100 105 110

Val Leu Ser Ala Leu Leu Tyr Lys Leu Lys Asn Ser Pro Asp Arg  
 115 120 125

Tyr Ala Cys Leu Val Ala Glu Gln Thr Ser Glu Thr Glu Thr Leu Ser  
 130 135 140

Ser Ser Ser Val Val Gly Val Val Asp Val Thr Ala Gln Thr Glu Ser  
 145 150 155 160

Ser Val Leu Arg Tyr Phe Pro Gly Val Glu Glu Tyr Leu Tyr Val Ser  
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165

175

Gly Leu Ala Val Ser Lys Ser Gln Arg Arg Lys Lys Met Ala Ser Thr  
180 185 190

Leu Leu Lys Ala Cys Asp Val Leu Cys Tyr Leu Trp Gly Phe Lys Leu  
195 200 205

Leu Ala Leu Arg Ala Tyr Glu Asp Asp Ala Ala Ala Arg Asn Leu Tyr  
210 215 220

Ser Asn Ala Gly Tyr Ser Val Val Glu Thr Asp Pro Leu Trp Thr Ser  
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<212> PRT

<213> Arabidopsis thaliana

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20 25 30

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 35 40 45

Glu Glu Pro Ser Ser Ile Glu Thr Ser Thr Arg Ser Leu Asn Val Met  
 50 55 60

Arg Lys Gly Ile Arg Lys Gln Pro Val Ser Ser Gly Lys Arg Gly Gly  
 65 70 75 80

Val Asn Asp Tyr Asp Met  
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<211> 507

<212> DNA

<213> Arabidopsis thaliana

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<211> 168

<212> PRT

<213> Arabidopsis thaliana

<400> 1516

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Ala Lys Cys Leu Met Leu Leu Ser Arg Val Gly Glu Cys Gly Gly Gly  
20 25 30

Cys Gly Gly Asp Glu Arg Val Phe Arg Cys Lys Thr Cys Leu Lys Glu  
35 40 45

Phe Ser Ser Phe Gln Ala Leu Gly Gly His Arg Ala Ser His Lys Lys  
50 55 60

Leu Ile Asn Ser Asp Asn Pro Ser Leu Leu Gly Ser Leu Ser Asn Lys  
65 70 75 80

Lys Thr Lys Thr Ser His Pro Cys Pro Ile Cys Gly Val Lys Phe Pro  
85 90 95

Met Gly Gln Ala Leu Gly Gly His Met Arg Arg His Arg Asn Glu Lys  
100 105 110

Val Ser Gly Ser Leu Val Thr Arg Ser Phe Leu Pro Glu Thr Thr Thr  
115 120 125

Val Thr Ala Leu Lys Lys Phe Ser Ser Gly Lys Arg Val Ala Cys Leu  
130 135 140

Asp Leu Asp Leu Asp Ser Met Glu Ser Leu Val Asn Trp Lys Leu Glu  
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<211> 1140

<212> DNA

<213> Arabidopsis thaliana

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<211> 379

<212> PRT

<213> *Arabidopsis thaliana*

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 20 25 30

Asp Phe Pro Ala Val Phe Asn Phe Gly Asp Ser Asn Ser Asp Thr Gly  
 35 40 45

Glu Leu Ser Ser Gly Leu Gly Phe Leu Pro Gln Pro Ser Tyr Glu Ile  
 50 55 60

Thr Phe Phe Arg Ser Pro Thr Ser Gly Arg Phe Cys Asn Gly Arg Leu  
 65 70 75 80

Ile Val Asp Phe Leu Met Glu Ala Ile Asp Arg Pro Tyr Leu Arg Pro  
 85 90 95

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Tyr Leu Asp Ser Ile Ser Arg Gln Thr Tyr Arg Arg Gly Cys Asn Phe  
 100 105 110  
 Ala Ala Ala Ala Ser Thr Ile Gln Lys Ala Asn Ala Ala Ser Tyr Ser  
 115 120 125  
 Pro Phe Gly Phe Gly Val Gln Val Ser Gln Phe Ile Thr Phe Lys Ser  
 130 135 140  
 Lys Val Leu Gln Leu Ile Gln Gln Asp Glu Glu Leu Gln Arg Tyr Leu  
 145 150 155 160  
 Pro Ser Glu Tyr Phe Phe Ser Asn Gly Leu Tyr Met Phe Asp Ile Gly  
 165 170 175  
 Gln Asn Asp Ile Ala Gly Ala Phe Tyr Thr Lys Thr Val Asp Gln Val  
 180 185 190  
 Leu Ala Leu Val Pro Ile Ile Leu Asp Ile Phe Gln Asp Gly Ile Lys  
 195 200 205  
 Arg Leu Tyr Ala Glu Gly Ala Arg Asn Tyr Trp Ile His Asn Thr Gly  
 210 215 220  
 Pro Leu Gly Cys Leu Ala Gln Val Val Ser Ile Phe Gly Glu Asp Lys  
 225 230 235 240  
 Ser Lys Leu Asp Glu Phe Gly Cys Val Ser Asp His Asn Gln Ala Ala  
 245 250 255  
 Lys Leu Phe Asn Leu Gln Leu His Gly Leu Phe Lys Lys Leu Pro Gln  
 260 265 270  
 Gln Tyr Pro Asn Ser Arg Phe Thr Tyr Val Asp Ile Phe Ser Ile Lys  
 275 280 285  
 Ser Asp Leu Ile Leu Asn His Ser Lys Tyr Gly Phe Asp His Ser Ile  
 290 295 300  
 Met Val Cys Cys Gly Thr Gly Gly Pro Pro Leu Asn Tyr Asp Asp Gln  
 305 310 315 320  
 Val Gly Cys Gly Lys Thr Ala Arg Ser Asn Gly Thr Ile Ile Thr Ala  
 325 330 335  
 Lys Pro Cys Tyr Asp Ser Ser Lys Tyr Val Asn Trp Asp Gly Ile His  
 340 345 350

047-E2F-PCT.ST25.txt

Tyr Thr Glu Ala Ala Asn Arg Phe Val Ala Leu His Ile Leu Thr Gly  
355 360 365

Lys Tyr Ser Glu Thr Ala Ser Ser Leu Asn Leu  
370 375

<210> 1519

<211> 141

<212> DNA

<213> Arabidopsis thaliana

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<210> 1520

<211> 46

<212> PRT

<213> Arabidopsis thaliana

<400> 1520

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20 25 30

Gln Lys Pro Lys Ala Ser Asp Asn Lys Pro Val Met Asn Glu  
35 40 45

<210> 1521

<211> 1257

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 1522

&lt;211&gt; 418

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1522

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1 5 10 15	

Leu Gly Leu Pro Gln Asp Leu Cys Asn Thr Glu Ile Ile Lys Asn Ser	
20 25 30	



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Arg Ser His Leu Val Asn Pro Gly Ala Arg Gln Glu Ile Ile Pro Ala  
35 40 45

Ser Ser Phe Asn Leu Asn Thr Glu Leu Leu Glu Pro Trp Lys Pro Val  
50 55 60

Ser Ser Phe Ser Gln Phe Val Glu Ile Asp Ser Ala Met Met Lys Pro  
65 70 75 80

Leu Leu Met Asp Val His Glu Thr Ala Pro Glu Ser Leu Ile Leu Ser  
85 90 95

Phe Gly Ile Ala Asp Lys Phe Ala Arg Gln Glu Lys Val Met Glu Phe  
100 105 110

Leu Leu Ser Gln Ser Glu Glu Phe Lys Glu Lys Gly Phe Asp Met Ser  
115 120 125

Leu Leu Asn Glu Leu Met Glu Phe Glu Ser Met Lys Ser Ser Ser Gln  
130 135 140

Leu Arg Pro Tyr Asp Thr Ser Ser Val Leu Tyr Leu Asn Gln Glu Leu  
145 150 155 160

Gly Lys Pro Val Leu Asp Leu Val Arg Asp Met Met Glu Asn Pro Glu  
165 170 175

Phe Ser Val Arg Ser Asn Gly His Val Leu Phe Ser Ser Ser Ser Asn  
180 185 190

Pro Glu Leu Asn Asp Leu Leu Ser Ile Ala Ser Glu Phe Asn Leu Ser  
195 200 205

Arg Asn Ser Thr Thr Lys Trp Arg Gln Leu Ser Pro Leu Ile Pro His  
210 215 220

Phe Gln Arg Phe Glu Ser Asp Val Phe Thr Pro Ala Lys Leu Lys Ala  
225 230 235 240

Val Thr Val Leu Ala Pro Leu Lys Ser Pro Glu Lys Ser Arg Leu Lys  
245 250 255

Ser Pro Arg Lys His Asn Thr Lys Arg Lys Ala Lys Glu Arg Asp Leu  
260 265 270

Tyr Lys Arg Asn His Leu His Ala Tyr Glu Ser Leu Leu Ser Leu Met  
275 280 285

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Ile Gly Asn Asp His Arg His Lys His Thr Thr Val Leu Ser Leu Gln  
290 295 300

Lys Ser Cys Gly Glu Leu Ser Glu Leu Leu Thr Gln Phe Ser Ile Thr  
305 310 315 320

Ala Ala Gly Thr Gly Ile Ala Val Leu Phe Ser Val Val Cys Ser Leu  
325 330 335

Ala Ser Arg Arg Val Pro Phe Cys Ala Asn Lys Phe Phe Asp Thr Gly  
340 345 350

Leu Gly Leu Ser Leu Val Ile Leu Ser Trp Ala Val Asn Arg Leu Arg  
355 360 365

Glu Val Ile Val His Val Asn Arg Lys Ala Asn Lys Pro Cys Ser Ser  
370 375 380

Leu Lys Asp Asp Glu Ile Ile Asn Ser Val Glu Arg Ser Met Lys Glu  
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Ala Cys

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<211> 1554

<212> DNA

<213> Arabidopsis thaliana

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<210> 1524

<211> 517

<212> PRT

<213> Arabidopsis thaliana

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20 25 30

Asn Ser Leu His Ser Val Gly Asn Arg Ser Ser Tyr Ile Ala Ala Ser  
35 40 45

Arg Ser His Cys Thr Trp Leu Ile Leu Ser Leu Leu Ser Leu Gln Leu  
Page 2333

50

55

60

Ile Leu Phe Leu Thr Leu Arg Ser Ile Pro Phe Pro His Arg His Ile  
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 85 90 95  
 Thr Thr Val Ile Ser Ala Ala Ser Ser Asn Pro Pro Leu Ser Ser Ser  
 100 105 110  
 Ser Ser Asp Glu Arg Cys Asp Ser Gly Arg Val Phe Val Tyr Asp Met  
 115 120 125  
 Pro Lys Ile Phe Asn Glu Val Ile Leu Gln Gln Cys Asp Asn Leu Asn  
 130 135 140  
 Pro Trp Ser Ser Arg Cys Asp Ala Leu Ser Asn Asp Gly Phe Gly Gln  
 145 150 155 160  
 Glu Ala Thr Ser Leu Ser Asn Val Ile Pro Lys Asp Leu Val Gln Ser  
 165 170 175  
 Trp Phe Trp Thr Asp Gln Phe Val Thr Glu Ile Ile Phe His Asn Arg  
 180 185 190  
 Ile Leu Asn His Arg Cys Arg Thr Leu Asp Pro Glu Ser Ala Thr Ala  
 195 200 205  
 Phe Tyr Ile Pro Phe Tyr Ala Gly Leu Ala Val Gly Gln Tyr Leu Trp  
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 Ser Asn Tyr Ala Ala Ala Asp Arg Asp Arg His Cys Lys Met Met Thr  
 225 230 235 240  
 Gln Trp Val Lys Asn Gln Pro Tyr Trp Asn Arg Ser Asn Gly Trp Asp  
 245 250 255  
 His Phe Ile Thr Met Gly Arg Ile Thr Trp Asp Phe Arg Arg Ser Lys  
 260 265 270  
 Asp Glu Asp Trp Gly Ser Asn Cys Ile Tyr Ile Pro Gly Met Arg Asn  
 275 280 285  
 Ile Thr Arg Leu Leu Ile Glu Arg Asn Ser Trp Asp His Phe Asp Val  
 290 295 300

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Gly Val Pro Tyr Pro Thr Gly Phe His Pro Arg Ser Asp Ser Asp Val  
305 310 315 320

Val Asn Trp Gln Asp Phe Val Arg Asn Arg Arg Arg Glu Thr Leu Phe  
325 330 335

Cys Phe Ala Gly Ala Pro Arg Ala Gly Ile Val Asn Asp Phe Arg Gly  
340 345 350

Leu Leu Leu Arg His Cys Glu Glu Ser Arg Gly Lys Cys Arg Thr Val  
355 360 365

Asp Cys Thr Val Gly Lys Cys Ser Asn Gly Ser Ser Ala Ile Leu Glu  
370 375 380

Thr Phe Leu Gly Ser Asp Phe Cys Leu Gln Pro Arg Gly Asp Ser Phe  
385 390 395 400

Thr Arg Arg Ser Ile Phe Asp Cys Met Leu Ala Gly Ser Ile Pro Val  
405 410 415

Phe Phe Trp Arg Arg Ser Ala Tyr Met Gln Tyr Gln Trp Phe Leu Pro  
420 425 430

Asp Lys Pro Asp Ser Tyr Ser Val Phe Ile Asp Arg Asn Glu Val Thr  
435 440 445

Asn Gly Thr Thr Ser Ile Lys Glu Val Leu Glu Arg Tyr Ser Lys Glu  
450 455 460

Asp Val Arg Lys Met Arg Glu Arg Val Ile Asp Leu Ile Pro Asn Leu  
465 470 475 480

Val Tyr Ala Lys Ser Pro Asn Gly Leu Glu Thr Phe Lys Asp Ala Phe  
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<211> 2175

<212> DNA

<213> Arabidopsis thaliana

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<212> PRT

<213> Arabidopsis thaliana

<400> 1526

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35 40 45

Lys Arg Arg Arg Pro Thr Leu Ala Ser Leu Asn Gln Glu Asp Gly Tyr  
50 55 60

Glu Tyr Asp Val Ala Ser Ala Lys Arg Arg Ala Phe Leu Leu Val Gly  
65 70 75 80

Ile Ser Val Leu Pro Phe Leu Gln Leu Arg Ser Pro Ala Leu Ala Asp  
85 90 95

Glu Ser Glu Phe Phe Tyr Cys Leu Asp Glu Ile Cys Ser Asn Val Ala  
100 105 110

Val Val Ser Glu Gly Thr Ser Pro Asn Pro Phe Leu Ala Leu Leu Asn  
115 120 125

Gly Leu Gly Ile Phe Ser Ala Gly Val Leu Gly Ala Leu Tyr Ala Leu  
130 135 140

047-E2F-PCT.ST25.txt

Ala Arg Gln Asp Thr Lys Ala Ala Glu Glu Thr Ile Glu Ser Leu Lys  
145 150 155 160

Asn Gln Leu Lys Asp Arg Glu Arg Ala Leu Val Leu Lys Glu Lys Asp  
165 170 175

Phe Glu Ala Lys Leu Gln His Glu Gln Glu Glu Arg Lys Lys Glu Val  
180 185 190

Glu Lys Ala Lys Glu Glu Gln Leu Ser Leu Ile Asn Gln Leu Asn Ser  
195 200 205

Ala Lys Asp Leu Val Thr Glu Leu Gly Arg Glu Leu Ser Ser Glu Lys  
210 215 220

Lys Leu Cys Glu Lys Leu Lys Asp Gln Ile Glu Ser Leu Glu Asn Ser  
225 230 235 240

Leu Ser Lys Ala Gly Glu Asp Lys Glu Ala Leu Glu Thr Lys Leu Arg  
245 250 255

Glu Lys Leu Asp Leu Val Glu Gly Leu Gln Asp Arg Ile Asn Leu Leu  
260 265 270

Ser Leu Glu Leu Lys Asp Ser Glu Glu Lys Ala Gln Arg Phe Asn Ala  
275 280 285

Ser Leu Ala Lys Lys Glu Ala Glu Leu Lys Glu Leu Asn Ser Ile Tyr  
290 295 300

Thr Gln Thr Ser Arg Asp Leu Ala Glu Ala Lys Leu Glu Ile Lys Gln  
305 310 315 320

Gln Lys Glu Glu Leu Ile Arg Thr Gln Ser Glu Leu Asp Ser Lys Asn  
325 330 335

Ser Ala Ile Glu Glu Leu Asn Thr Arg Ile Thr Thr Leu Val Ala Glu  
340 345 350

Lys Glu Ser Tyr Ile Gln Lys Leu Asp Ser Ile Ser Lys Asp Tyr Ser  
355 360 365

Ala Leu Lys Leu Thr Ser Glu Thr Gln Ala Ala Ala Asp Ala Glu Leu  
370 375 380

Ile Ser Arg Lys Glu Gln Glu Ile Gln Gln Leu Asn Glu Asn Leu Asp  
385 390 395 400



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Arg Ala Leu Asp Asp Val Asn Lys Ser Lys Asp Lys Val Ala Asp Leu  
405 410 415

Thr Glu Lys Tyr Glu Asp Ser Lys Arg Met Leu Asp Ile Glu Leu Thr  
420 425 430

Thr Val Lys Asn Leu Arg His Glu Leu Glu Gly Thr Lys Lys Thr Leu  
435 440 445

Gln Ala Ser Arg Asp Arg Val Ser Asp Leu Glu Thr Met Leu Asp Glu  
450 455 460

Ser Arg Ala Leu Cys Ser Lys Leu Glu Ser Glu Leu Ala Ile Val His  
465 470 475 480

Glu Glu Trp Lys Glu Ala Lys Glu Arg Tyr Glu Arg Asn Leu Asp Ala  
485 490 495

Glu Lys Gln Lys Asn Glu Ile Ser Ala Ser Glu Leu Ala Leu Glu Lys  
500 505 510

Asp Leu Arg Arg Arg Val Lys Asp Glu Leu Glu Gly Val Thr His Glu  
515 520 525

Leu Lys Glu Ser Ser Val Lys Asn Gln Ser Leu Gln Lys Glu Leu Val  
530 535 540

Glu Ile Tyr Lys Lys Val Glu Thr Ser Asn Lys Glu Leu Glu Glu Glu  
545 550 555 560

Lys Lys Thr Val Leu Ser Leu Asn Lys Glu Val Lys Gly Met Glu Lys  
565 570 575

Gln Ile Leu Met Glu Arg Glu Ala Arg Lys Ser Leu Glu Thr Asp Leu  
580 585 590

Glu Glu Ala Val Lys Ser Leu Asp Glu Met Asn Lys Asn Thr Ser Ile  
595 600 605

Leu Ser Arg Glu Leu Glu Lys Val Asn Thr His Ala Ser Asn Leu Glu  
610 615 620

Asp Glu Lys Glu Val Leu Gln Arg Ser Leu Gly Glu Ala Lys Asn Ala  
625 630 635 640

Ser Lys Glu Ala Lys Glu Asn Val Glu Asp Ala His Ile Leu Val Met

Ser Leu Gly Lys Glu Arg Glu Val Leu Glu Lys Lys Val Lys Lys Leu  
660 665 670

Glu Glu Asp Leu Gly Ser Ala Lys Gly Glu Ile Leu Arg Met Arg Ser  
675 680 685

Gln Pro Asp Ser Val Lys Ala Val Asn Ser Thr Asp Asn Lys Glu Lys  
690 695 700

Ser Asp Asn Thr Val Thr Val Lys Lys Val Val Arg Arg Arg Lys Ser  
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Ser Thr Ser Ser

<210> 1527

<211> 849

<212> DNA

<213> Arabidopsis thaliana

<400> 1527  
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ccacaagaga caagatcaac gcgttgctct ggtgcctgca ataagctacc acgttccttc 180  
gcacaagccc tgatccatta ctcgacctca gttatcacac cacaacaac gctcaaagag 240  
atagcggtaa gcagtagagt actcggcaag aagtcacct gcaatttctt ggtgtttggt 300  
ctaggccatg acagcctcat gtggagctct ctcaactatg gaggccggac tgtgtttctt 360  
gaagaagatg aagcatggat aaaacagatc aagagacggt ttccgatgct ggaatcgtac 420  
catgtaacat atgacagtaa agtcaatcaa gccgataatc tcatagaagt cggaaaaagga 480  
cctgaatgca cagccattgg agatccaagg tactcaatgt gtcaactagc actcaagggt 540  
ttgcctgcag aaatttatga gaccggttgg gatctaata tggttgatgc accgactggc 600  
tactacgatg aggtccttgg gagaatgaca gcaatttaca ctgcgggaat gatggcaagg 660  
aacaggaaac agggaggaga gactgatgtg ttgtgcatg atgttaacag ggaaatagaa 720  
gacaagtttt ctaaggcttt cttgtgtgaa ggttacatga agaaacagga agggagacta 780  
aggcatttta ttatccctag ctatagagat ggatcagaat cagaatcaaa tagacccttt 840  
tgtccatag 849

&lt;210&gt; 1528

&lt;211&gt; 282

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1528

Met Arg Pro Lys Ala Asn Gln Asn His Lys Leu Lys Val Leu Leu Val  
1 5 10 15Phe Leu Leu Ala Thr Leu Ile Leu Ile Phe Ile Val Arg Ser Thr Leu  
20 25 30Thr Ser Ser Gln Glu His Gln Thr Pro Gln Glu Thr Arg Ser Thr Arg  
35 40 45Cys Ser Gly Ala Cys Asn Lys Leu Pro Arg Ser Leu Ala Gln Ala Leu  
50 55 60Ile His Tyr Ser Thr Ser Val Ile Thr Pro Gln Gln Thr Leu Lys Gln  
65 70 75 80Ile Ala Val Ser Ser Arg Val Leu Gly Lys Lys Ser Pro Cys Asn Phe  
85 90 95Leu Val Phe Gly Leu Gly His Asp Ser Leu Met Trp Ser Ser Leu Asn  
100 105 110Tyr Gly Gly Arg Thr Val Phe Leu Glu Glu Asp Glu Ala Trp Ile Lys  
115 120 125Gln Ile Lys Arg Arg Phe Pro Met Leu Glu Ser Tyr His Val Thr Tyr  
130 135 140Asp Ser Lys Val Asn Gln Ala Asp Asn Leu Ile Glu Val Gly Lys Gly  
145 150 155 160Pro Glu Cys Thr Ala Ile Gly Asp Pro Arg Tyr Ser Met Cys Gln Leu  
165 170 175Ala Leu Lys Gly Leu Pro Ala Glu Ile Tyr Glu Thr Gly Trp Asp Leu  
180 185 190Ile Met Val Asp Ala Pro Thr Gly Tyr Tyr Asp Glu Ala Pro Gly Arg  
2341

195 047-E2F-PCT.ST25.txt  
200 205

Met Thr Ala Ile Tyr Thr Ala Gly Met Met Ala Arg Asn Arg Lys Gln  
210 215 220

Gly Gly Glu Thr Asp Val Phe Val His Asp Val Asn Arg Glu Ile Glu  
225 230 235 240

Asp Lys Phe Ser Lys Ala Phe Leu Cys Glu Gly Tyr Met Lys Lys Gln  
245 250 255

Glu Gly Arg Leu Arg His Phe Ile Ile Pro Ser Tyr Arg Asp Gly Ser  
260 265 270

Glu Ser Glu Ser Asn Arg Pro Phe Cys Pro  
275 280

<210> 1529

<211> 741

<212> DNA

<213> Arabidopsis thaliana

<400> 1529  
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ctagaaaagg ctgggtcaatt cacattgttc ataagacttc ttaaagcac tcaagcctca 180  
gaccaaatca acactcagct caattcttcc tcgagtaatg gcttaaccgt gtttgccccg 240  
actgataacg ctttcaacag cctcaaatcc ggaaccttaa actcattgtc tgaccaacaa 300  
aaagttcagc ttgttcagtt ccatgtctta cctacactca taaccatgcc tcagtttcaa 360  
accgttagta accctttacg cagcgaagct ggagatggcc aaaacggtaa attcctcttt 420  
aacatcacta gtcctggtaa ccaagttaac atcaccactg gagttgtcag cgccaccgtg 480  
gtaactctg tctacagcga taagcagctg gccgtttatc aggttgatca agttttgctg 540  
ccattagcca tgtttggatc aagcgtggct cctgctccgg cccctgagaa aggcggctct 600  
gtttcaaaag gtcagcttc cggtggcgat gatggaggag attctactga ttcactgtat 660  
gcagagagga ctggattcgg gtttgggatc agaatcacta ccgttgacgc cattgctgct 720  
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<210> 1530

&lt;211&gt; 246

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1530

Met Ala Thr Ser Arg Thr Phe Ile Phe Ser Asn Leu Phe Ile Phe Phe  
 1 5 10 15

Leu Val Ile Ala Thr Thr Tyr Gly Gln Ala Pro Ala Pro Gly Pro Ser  
 20 25 30

Gly Pro Thr Asn Ile Thr Ala Ile Leu Glu Lys Ala Gly Gln Phe Thr  
 35 40 45

Leu Phe Ile Arg Leu Leu Lys Ser Thr Gln Ala Ser Asp Gln Ile Asn  
 50 55 60

Thr Gln Leu Asn Ser Ser Ser Ser Asn Gly Leu Thr Val Phe Ala Pro  
 65 70 75 80

Thr Asp Asn Ala Phe Asn Ser Leu Lys Ser Gly Thr Leu Asn Ser Leu  
 85 90 95

Ser Asp Gln Gln Lys Val Gln Leu Val Gln Phe His Val Leu Pro Thr  
 100 105 110

Leu Ile Thr Met Pro Gln Phe Gln Thr Val Ser Asn Pro Leu Arg Thr  
 115 120 125

Gln Ala Gly Asp Gly Gln Asn Gly Lys Phe Pro Leu Asn Ile Thr Ser  
 130 135 140

Ser Gly Asn Gln Val Asn Ile Thr Thr Gly Val Val Ser Ala Thr Val  
 145 150 155 160

Ala Asn Ser Val Tyr Ser Asp Lys Gln Leu Ala Val Tyr Gln Val Asp  
 165 170 175

Gln Val Leu Leu Pro Leu Ala Met Phe Gly Ser Ser Val Ala Pro Ala  
 180 185 190

Pro Ala Pro Glu Lys Gly Gly Ser Val Ser Lys Gly Ser Ala Ser Gly  
 195 200 205

Gly Asp Asp Gly Gly Asp Ser Thr Asp Ser Ser Asp Ala Glu Arg Thr  
 Page 2343

210

215

220

Gly Phe Gly Phe Gly Ile Arg Ile Thr Thr Val Ala Ala Ile Ala Ala  
 225 230 235 240

Ser Ser Ser Leu Trp Ile  
 245

&lt;210&gt; 1531

&lt;211&gt; 843

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

<400> 1531  
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 tctgctaagc ccaagcttcg ctttctctcc aagcctagtc gcagtagcta ccttgtagtg 180  
 aaagcacaat ctaacaaggt tagtactggt gcatcatcaa atgctgccaa agttgatggg 240  
 ccatcatcag ctgaaggaaa ggagaaaaac tcattgaagg agtcgtctgc tcttctcct 300  
 gaattagcta cagaagagtc tatttctgag ttccttacc aagtaacaac tcttgtaag 360  
 cttgtggatt caagagacat tgttgagttg cagttgaaac aactgcagtc tgaactagtc 420  
 attcgaaaaa aagaagcctt acctcaacct caagctcctg catcttatgt tatgatgcag 480  
 caaccaaatt aaccatctta tgcccagcaa atggctcctc ctgctgcacc tgcgtctgcc 540  
 gcaccagccc cttctacgcc agcctctctg cctccacat cccacacctac tccagccaaa 600  
 tcgtcacttc ctactgttaa agccccatg gctggcacat tctaccgtag tcttgacact 660  
 ggtgaaccac cttttattaa ggttgagac aaagtcgaga aggggcaagt tctatgcatt 720  
 gttgaagcca tgaagttaat gaatgaata gagtctgacc ataccggaac cgtagtcgat 780  
 attgtcgcag aagacggcaa gcctgtcagc ctcgacactc ctctgtttgt gtttcaaccg 840  
 tag 843

&lt;210&gt; 1532

&lt;211&gt; 280

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1532

Met Ala Ser Ser Ser Phe Ser Val Thr Ser Pro Ala Ala Ala Ala Ser  
 1 5 10 15  
 Val Tyr Ala Val Thr Gln Thr Ser Ser His Phe Pro Ile Gln Asn Arg  
 20 25 30  
 Ser Arg Arg Val Ser Phe Arg Leu Ser Ala Lys Pro Lys Leu Arg Phe  
 35 40 45  
 Leu Ser Lys Pro Ser Arg Ser Ser Tyr Pro Val Val Lys Ala Gln Ser  
 50 55 60  
 Asn Lys Val Ser Thr Gly Ala Ser Ser Asn Ala Ala Lys Val Asp Gly  
 65 70 75 80  
 Pro Ser Ser Ala Glu Gly Lys Glu Lys Asn Ser Leu Lys Glu Ser Ser  
 85 90 95  
 Ala Ser Ser Pro Glu Leu Ala Thr Glu Glu Ser Ile Ser Glu Phe Leu  
 100 105 110  
 Thr Gln Val Thr Thr Leu Val Lys Leu Val Asp Ser Arg Asp Ile Val  
 115 120 125  
 Glu Leu Gln Leu Lys Gln Leu Asp Cys Glu Leu Val Ile Arg Lys Lys  
 130 135 140  
 Glu Ala Leu Pro Gln Pro Gln Ala Pro Ala Ser Tyr Val Met Met Gln  
 145 150 155 160  
 Gln Pro Asn Gln Pro Ser Tyr Ala Gln Gln Met Ala Pro Pro Ala Ala  
 165 170 175  
 Pro Ala Ala Ala Ala Pro Ala Pro Ser Thr Pro Ala Ser Leu Pro Pro  
 180 185 190  
 Pro Ser Pro Pro Thr Pro Ala Lys Ser Ser Leu Pro Thr Val Lys Ser  
 195 200 205  
 Pro Met Ala Gly Thr Phe Tyr Arg Ser Pro Ala Pro Gly Glu Pro Pro  
 210 215 220  
 Phe Ile Lys Val Gly Asp Lys Val Gln Lys Gly Gln Val Leu Cys Ile  
 225 230 235 240  
 Val Glu Ala Met Lys Leu Met Asn Glu Ile Glu Ser Asp His Thr Gly  
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Thr Val Val Asp Ile Val Ala Glu Asp Gly Lys Pro Val Ser Leu Asp  
 260 265 270

Thr Pro Leu Phe Val Val Gln Pro  
 275 280

<210> 1533

<211> 510

<212> DNA

<213> Arabidopsis thaliana

<400> 1533  
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 ggtaccattg atgctaaaga gcttaatgtt gctatgaggg cgcttggttt tgaatgacg 180  
 gaagagcaaa tcaacaaaat gatagctgat gtggataaag atggaagtgg agctatagat 240  
 ttgatgagt ttgttcatat gatgactgct aagattggtg aaagagacac aaaagaagag 300  
 ctactaaag cattccagat cattgatctt gacaaaaatg ggaagatatt tccggatgat 360  
 atcaaacgca tggcaaaagga ctgggtgag aatttctactg atgctgagat acgagagatg 420  
 gttgaagaag cagaccgaga ccgtgatggt gaagttaaca tggatgaatt catgaggatg 480  
 atgaggagaa ctgccttatgg tggtaactag 510

<210> 1534

<211> 169

<212> PRT

<213> Arabidopsis thaliana

<400> 1534

Met Ser Ser Ile Tyr Arg Thr Val Ser Arg Lys Glu Lys Pro Arg Arg  
 1 5 10 15

His His Gly Leu Thr Thr Gln Lys Lys Gln Glu Ile Lys Glu Ala Phe  
 20 25 30

Glu Leu Phe Asp Thr Asp Gly Ser Gly Thr Ile Asp Ala Lys Glu Leu  
 35 40 45



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Asn Val Ala Met Arg Ala Leu Gly Phe Glu Met Thr Glu Glu Gln Ile  
50 55 60

Asn Lys Met Ile Ala Asp Val Asp Lys Asp Gly Ser Gly Ala Ile Asp  
65 70 75 80

Phe Asp Glu Phe Val His Met Met Thr Ala Lys Ile Gly Glu Arg Asp  
85 90 95

Thr Lys Glu Glu Leu Thr Lys Ala Phe Gln Ile Ile Asp Leu Asp Lys  
100 105 110

Asn Gly Lys Ile Ser Pro Asp Asp Ile Lys Arg Met Ala Lys Asp Leu  
115 120 125

Gly Glu Asn Phe Thr Asp Ala Glu Ile Arg Glu Met Val Glu Glu Ala  
130 135 140

Asp Arg Asp Arg Asp Gly Glu Val Asn Met Asp Glu Phe Met Arg Met  
145 150 155 160

Met Arg Arg Thr Ala Tyr Gly Gly Asn  
165

<210> 1535

<211> 813

<212> DNA

<213> Arabidopsis thaliana

<400> 1535  
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tcttcggcat ccgttccagg gctcatcgaa ctctcgaat cgaacaccat ctttgggaac 120  
gaagccgaac tcttagagaa agaggggactg tccatcaact accccaactg cagaagctgg 180  
caccttggtg ttgagacctc taacatcata aacttcgaca cggtgccgcg aaattgcaaa 240  
gcctatgttg aagactactt gatcacttcc aaacagtacc aatcagactc caaaactgta 300  
aacaaagagg catattttta cgccaaagga cttgccctaa agaacgatac cgtcaatggt 360  
tggatctttg acctagacga cactctctc tctagtattc cctactacgc taaatatgga 420  
tatgggaccg agaacacagc cccgggggcg tactggctgt ggttagagtc cggagaatca 480  
actccaggac tcccgagagc cttgcatcta tacgaaaacc tcttgggaact cgggattgaa 540

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cccatcataa tctctgacag atggaaaaaa ttgtcagaag tcactgtcga gaatttcaag      600
gctgttggtg taacaaaatg gaagcatctc atactcaagc caaacggatc gaagttgacg      660
caagtgggtg acaagtcaaa ggtaggaat agccttgatg agaaagggtg caacatcggt      720
gggaatattg gagaccaatg ggctgatttg gttgaggata ctcttgaag ggtttttaag      780
ctcccaaadc cactctacta cgtaccttct taa                                  813

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&lt;210&gt; 1536

&lt;211&gt; 270

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1536

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Met Lys Ile Leu Ser Leu Ser Leu Leu Leu Leu Ala Ala Thr Val
1      5      10      15
Ser His Val Gln Ser Ser Ala Ser Val Pro Gly Leu Ile Glu Leu Leu
20     25     30
Glu Ser Asn Thr Ile Phe Gly Asn Glu Ala Glu Leu Leu Glu Lys Glu
35     40
Gly Leu Ser Ile Asn Tyr Pro Asn Cys Arg Ser Trp His Leu Gly Val
50     55     60
Glu Thr Ser Asn Ile Ile Asn Phe Asp Thr Val Pro Ala Asn Cys Lys
65     70     75     80
Ala Tyr Val Glu Asp Tyr Leu Ile Thr Ser Lys Gln Tyr Gln Tyr Asp
85     90     95
Ser Lys Thr Val Asn Lys Glu Ala Tyr Phe Tyr Ala Lys Gly Leu Ala
100    105    110
Leu Lys Asn Asp Thr Val Asn Val Trp Ile Phe Asp Leu Asp Asp Thr
115    120    125
Leu Leu Ser Ser Ile Pro Tyr Tyr Ala Lys Tyr Gly Tyr Gly Thr Glu
130    135    140
Asn Thr Ala Pro Gly Ala Tyr Trp Ser Trp Leu Glu Ser Gly Glu Ser
145    150    155    160

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Thr Pro Gly Leu Pro Glu Thr Leu His Leu Tyr Glu Asn Leu Leu Glu  
165 170 175

Leu Gly Ile Glu Pro Ile Ile Ile Ser Asp Arg Trp Lys Lys Leu Ser  
180 185 190

Glu Val Thr Val Glu Asn Leu Lys Ala Val Gly Val Thr Lys Trp Lys  
195 200 205

His Leu Ile Leu Lys Pro Asn Gly Ser Lys Leu Thr Gln Val Val Tyr  
210 215 220

Lys Ser Lys Val Arg Asn Ser Leu Val Lys Lys Gly Tyr Asn Ile Val  
225 230 235 240

Gly Asn Ile Gly Asp Gln Trp Ala Asp Leu Val Glu Asp Thr Pro Gly  
245 250 255

Arg Val Phe Lys Leu Pro Asn Pro Leu Tyr Tyr Val Pro Ser  
260 265 270

<210> 1537

<211> 1659

<212> DNA

<213> Arabidopsis thaliana

<400> 1537

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ttcaagaaac gatctcagac agtttcttgc cctcctgatt ggatcattgg accgaaccaa	180
accaagtgtc atgcttactt taaaaactct acttcatggg agaagtcaga aatgttctgt	240
agaacttatg gtggctactt agcatcgctt gcatcgagca aagaactcag ctttgttcaa	300
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acctcaggtt tccgttggag ctggtctgat cctaagactc ctcaatggaa ccaatccatg	420
tttctctaaa ttccaattcg caccgcgtgt ggcaatggca acggcagttc atcgtgtcgt	480
gctaataatat gtatagccgt gacaaatggt tcatcatcaa tattcggtga aagatgtaat	540
gcgtctcatg cttttgtttg cgctgttgat tctgatatca aatgtcgcaa ttgtcacaaa	600
tatctagtta tcttcgctgt tgtcagcggg ttgattctct tcacgacatt cgccattata	660
ttatggtctc ttgtctataa gcgaagcaag aaacgccgaa aatcacgaaa agtatctaat	720

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ccagcttcat catcatcagt agttctctct tcattggaaga tcttcactag tgaagaactg   780
agatcaatga cgaagaactt cagtgaagca aaccgtctag ctggggagcgc gaaaaccggt   840
ggaacctata gcggtgggtt atcagacggg actaaagtgg cggttaagag attgaaaagg   900
tctagttttc agaggaagaa agagttctac tccgagatta gaagagcagc taaactttat   960
caccgcaatg tagttgctat aaaaggttgt tgctatgac atggagaacg ttctattggt 1020
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ctacttgatg aggagtttgg agctcattta atgggtgttg gtctctcaaa attcgttctt 1260
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gatccggtta ttacatcggc ttaccggaa gcatgtgtgg ttcagaaagt tgttgacttg 1560
gtttattctt gtactcagaa tgtgccatca atgcgtccaa ggatgtcaca tgtggttcac 1620
cagcttcagc aattggtcca accttagag gttaagtag                               1659

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&lt;210&gt; 1538

&lt;211&gt; 552

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1538

Met Glu Leu Lys Trp Val Ser Cys Arg Lys Gln Ser Leu Phe Leu Ile  
 1 5 10 15

Ser Cys Leu Ala Leu Leu Cys Leu Ala Ser Leu Asp Thr Ile Ser Cys  
 20 25 30

Glu Ser Thr Gln Asn Ala Thr Asp Phe Lys Lys Arg Ser Gln Thr Val  
 35 40 45

Ser Cys Pro Pro Asp Trp Ile Ile Gly Pro Asn Gln Thr Lys Cys Tyr  
 50 55 60

Ala Tyr Phe Lys Asn Ser Thr Ser Trp Glu Lys Ser Glu Met Phe Cys  
 65 70 75 80

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Arg Thr Tyr Gly Gly His Leu Ala Ser Leu Ala Ser Ser Lys Glu Leu  
85 90 95

Ser Phe Val Gln Lys Leu Cys Asn Gly Asn Val Ser Ser Cys Trp Ile  
100 105 110

Gly Gly Arg Ser Met Asn Ser Ser Thr Ser Gly Phe Arg Trp Ser Trp  
115 120 125

Ser Asp Pro Lys Thr Pro Gln Trp Asn Gln Ser Met Phe Pro Lys Val  
130 135 140

Pro Ile Arg Thr Arg Cys Gly Asn Gly Asn Gly Ser Ser Ser Cys Arg  
145 150 155 160

Ala Asn Ile Cys Ile Ala Val Thr Asn Gly Ser Ser Ser Ile Phe Gly  
165 170 175

Glu Arg Cys Asn Ala Ser His Ala Phe Val Cys Ala Val Asp Ser Asp  
180 185 190

Ile Lys Cys Arg Asn Cys His Lys Tyr Leu Val Ile Leu Ala Val Val  
195 200 205

Ser Gly Leu Ile Leu Phe Thr Thr Phe Ala Ile Ile Leu Trp Leu Leu  
210 215 220

Val Tyr Lys Arg Ser Lys Lys Arg Arg Lys Ser Arg Lys Val Ser Asn  
225 230 235 240

Pro Ala Ser Ser Ser Ser Val Val Pro Pro Ser Trp Lys Ile Phe Thr  
245 250 255

Ser Glu Glu Leu Arg Ser Met Thr Lys Asn Phe Ser Glu Ala Asn Arg  
260 265 270

Leu Ala Gly Asp Ala Lys Thr Gly Gly Thr Tyr Ser Gly Gly Leu Ser  
275 280 285

Asp Gly Thr Lys Val Ala Val Lys Arg Leu Lys Arg Ser Ser Phe Gln  
290 295 300

Arg Lys Lys Glu Phe Tyr Ser Glu Ile Arg Arg Ala Ala Lys Leu Tyr  
305 310 315 320

His Pro Asn Val Val Ala Ile Lys Gly Cys Cys Tyr Asp His Gly Glu  
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Arg Phe Ile Val Tyr Glu Phe Ile Ala Ser Gly Pro Leu Asp Arg Trp  
340 345 350

Leu His His Val Pro Arg Gly Gly Arg Ser Leu Asp Trp Asn Met Arg  
355 360 365

Leu Asn Ile Ala Thr Thr Leu Ala Gln Gly Ile Ala Phe Leu His Asp  
370 375 380

Lys Val Lys Pro Gln Val Val His Arg Asp Ile Arg Ala Ser Asn Val  
385 390 395 400

Leu Leu Asp Glu Glu Phe Gly Ala His Leu Met Gly Val Gly Leu Ser  
405 410 415

Lys Phe Val Pro Trp Glu Val Met Gln Glu Arg Thr Val Met Ala Gly  
420 425 430

Gly Thr Tyr Gly Tyr Leu Ala Pro Glu Tyr Val Tyr Arg Asn Glu Leu  
435 440 445

Thr Thr Lys Ser Asp Val Tyr Ser Phe Gly Val Leu Leu Leu Glu Ile  
450 455 460

Val Ser Gly Arg Arg Pro Thr Gln Ala Val Asn Ser Ser Val Gly Trp  
465 470 475 480

Gln Ser Ile Phe Glu Trp Ala Thr Pro Leu Val Gln Ala Asn Arg Trp  
485 490 495

Leu Glu Ile Leu Asp Pro Val Ile Thr Cys Gly Leu Pro Glu Ala Cys  
500 505 510

Val Val Gln Lys Val Val Asp Leu Val Tyr Ser Cys Thr Gln Asn Val  
515 520 525

Pro Ser Met Arg Pro Arg Met Ser His Val Val His Gln Leu Gln Gln  
530 535 540

Leu Val Gln Pro Leu Glu Val Lys  
545 550

<210> 1539

<211> 804

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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ctagaggaac gacgagaaga agaagcactg aagaattttc cggtagagctt tctttagagag    180
agggctatga gtgacgagac gatgatgacg acgagttcca agacaagttt gtttagttct    240
tcatacagatg atttgttctt gtctcctaga tcggtcttac ccgttaaacc aacgccgatg    300
aagcttcaga cgatctcttc cgaaaaagaa gtcaacgcgt tcacgattgc ggaagagagag    360
agactacttt cagagaagga agagcagagg aagaagaaga agaagaagag taatgtgaga    420
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ctagggtttg tcttttcgga ggtatgacct aaagactccg atctagtttc gattcttcct    540
gggttacaga gattggtgaa gaaagatgat ggagtaacaa aagaagaaga agaagaagaa    600
gaagaagaca aaatcgggtg aaacagagca gcgagaccgt atttgcgga agcgtgggat    660
cattgtggag gaagaaaagg aaaaaacaa atcacgccg agattaagtg gagagttccg    720
gcgccggcgg cggctagcga agttgactta aaagataatc taaggctttg ggctcatgct    780
gtggcctcga ctattcgaag ttaa                                804

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&lt;210&gt; 1540

&lt;211&gt; 267

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1540

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Met Ala Gly Glu 5 Leu Leu Lys Leu 10 Phe Glu Gln Asn Trp Ser Glu
Arg Pro Ile Phe 20 Lys Lys Asp Lys 25 Glu Asn Leu Asn Gly 30 Lys Ser Arg
Glu Lys Arg 35 Gly Glu Lys Glu 40 Ile Leu Glu Glu Arg 45 Arg Glu Glu Glu
Ala Leu 50 Lys Asn Phe Pro Val 55 Ser Phe Leu Val 60 Glu Arg Ala Met Ser

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Asp Glu Thr Met Met Thr Thr Ser Ser Lys Thr Ser Leu Phe Ser Ser  
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Ser Ser Asp Asp Leu Phe Leu Ser Pro Arg Ser Val Leu Pro Val Lys  
85 90 95

Pro Thr Pro Met Lys Leu Gln Thr Ile Leu Ser Gly Lys Glu Val Asn  
100 105 110

Ala Phe Thr Ile Ala Glu Arg Glu Arg Leu Leu Ser Glu Lys Glu Glu  
115 120 125

Gln Arg Lys Lys Lys Lys Lys Ser Asn Val Arg Thr Arg Lys Gly  
130 135 140

Lys Ser Met Ser Asp Leu Glu Tyr Glu Glu Leu Lys Gly Phe Met Asp  
145 150 155 160

Leu Gly Phe Val Phe Ser Glu Asp Asp His Lys Asp Ser Asp Leu Val  
165 170 175

Ser Ile Leu Pro Gly Leu Gln Arg Leu Val Lys Lys Asp Asp Gly Val  
180 185 190

Thr Lys Glu Glu Glu Glu Glu Glu Glu Asp Lys Ile Gly Gly Asn  
195 200 205

Arg Ala Ala Arg Pro Tyr Leu Ser Glu Ala Trp Asp His Cys Gly Gly  
210 215 220

Arg Lys Gly Lys Lys Gln Ile Thr Pro Glu Ile Lys Trp Arg Val Pro  
225 230 235 240

Ala Pro Ala Ala Ala Ser Glu Val Asp Leu Lys Asp Asn Leu Arg Leu  
245 250 255

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260 265

<210> 1541

<211> 2178

<212> DNA

<213> Arabidopsis thaliana



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ccacactccg ccacaagagc cgccatgctt gtacgaatca acactctcct ccaaggattt	540
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tttttgggac taatctcgtc tcgcaaaact tctgaagctg ttgatattct caagcttatg	1560
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gtcaatgggt agcttcatcc ttctcgcttc tgcgaaaagg atttactcaa agttgtagac	1740
cgtgaacaag tctacacata cgcggatgat ccttgtagcg caacgtaccc gttgattcag	1800
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cttttgaccg gagagaaagt gacgtcgctt ggagaagagt tgcacaaggt ttccacggcg 2100  
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<210> 1542

<211> 725

<212> PRT

<213> Arabidopsis thaliana

<400> 1542

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Met Leu Cys Gly Gly Asp Ile Lys Thr Lys Asn Met Val Ile Asn Ala  
20 25 30

Glu Asp Pro Leu Asn Trp Gly Ala Ala Ala Glu Gln Met Lys Gly Ser  
35 40 45

His Leu Asp Glu Val Lys Arg Met Val Ala Glu Phe Arg Lys Pro Val  
50 55 60

Val Asn Leu Gly Gly Glu Thr Leu Thr Ile Gly Gln Val Ala Ala Ile  
65 70 75 80

Ser Thr Ile Gly Asn Ser Val Lys Val Glu Leu Ser Glu Thr Ala Arg  
85 90 95

Ala Gly Val Asn Ala Ser Ser Asp Trp Val Met Glu Ser Met Asn Lys  
100 105 110

Gly Thr Asp Ser Tyr Gly Val Thr Thr Gly Phe Gly Ala Thr Ser His  
115 120 125

Arg Arg Thr Lys Asn Gly Val Ala Leu Gln Lys Glu Leu Ile Arg Phe  
130 135 140

Leu Asn Ala Gly Ile Phe Gly Ser Thr Lys Glu Thr Ser His Thr Leu  
145 150 155 160

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Pro His Ser Ala Thr Arg Ala Ala Met Leu Val Arg Ile Asn Thr Leu  
165 170 175

Leu Gln Gly Phe Ser Gly Ile Arg Phe Glu Ile Leu Glu Ala Ile Thr  
180 185 190

Ser Phe Leu Asn Asn Asn Ile Thr Pro Ser Leu Pro Leu Arg Gly Thr  
195 200 205

Ile Thr Ala Ser Gly Asp Leu Val Pro Leu Ser Tyr Ile Ala Gly Leu  
210 215 220

Leu Thr Gly Arg Pro Asn Ser Lys Ala Thr Gly Pro Asn Gly Glu Ala  
225 230 235 240

Leu Thr Ala Glu Glu Ala Phe Lys Leu Ala Gly Ile Ser Ser Gly Phe  
245 250 255

Phe Asp Leu Gln Pro Lys Glu Gly Leu Ala Leu Val Asn Gly Thr Ala  
260 265 270

Val Gly Ser Gly Met Ala Ser Met Val Leu Phe Glu Thr Asn Val Leu  
275 280 285

Ser Val Leu Ala Glu Ile Leu Ser Ala Val Phe Ala Glu Val Met Ser  
290 295 300

Gly Lys Pro Glu Phe Thr Asp His Leu Thr His Arg Leu Lys His His  
305 310 315 320

Pro Gly Gln Ile Glu Ala Ala Ala Ile Met Glu His Ile Leu Asp Gly  
325 330 335

Ser Ser Tyr Met Lys Leu Ala Gln Lys Leu His Glu Met Asp Pro Leu  
340 345 350

Gln Lys Pro Lys Gln Asp Arg Tyr Ala Leu Arg Thr Ser Pro Gln Trp  
355 360 365

Leu Gly Pro Gln Ile Glu Val Ile Arg Tyr Ala Thr Lys Ser Ile Glu  
370 375 380

Arg Glu Ile Asn Ser Val Asn Asp Asn Pro Leu Ile Asp Val Ser Arg  
385 390 395 400

Asn Lys Ala Ile His Gly Gly Asn Phe Gln Gly Thr Pro Ile Gly Val  
Page 2357

Ser Met Asp Asn Thr Arg Leu Ala Ile Ala Ala Ile Gly Lys Leu Met  
420 425 430

Phe Ala Gln Phe Ser Glu Leu Val Asn Asp Phe Tyr Asn Asn Gly Leu  
435 440 445

Pro Ser Asn Leu Thr Ala Ser Arg Asn Pro Ser Leu Asp Tyr Gly Phe  
450 455 460

Lys Gly Ala Glu Ile Ala Met Ala Ser Tyr Cys Ser Glu Leu Gln Tyr  
465 470 475

Leu Ala Asn Pro Val Thr Ser His Val Gln Ser Ala Glu Gln His Asn  
485 490 495

Gln Asp Val Asn Ser Leu Gly Leu Ile Ser Ser Arg Lys Thr Ser Glu  
500 505 510

Ala Val Asp Ile Leu Lys Leu Met Ser Thr Thr Phe Leu Val Ala Ile  
515 520 525

Cys Gln Ala Val Asp Leu Arg His Leu Glu Glu Asn Leu Arg Gln Thr  
530 535 540

Val Lys Asn Thr Val Ser Gln Val Ala Lys Lys Val Leu Thr Thr Gly  
545 550 555 560

Val Asn Gly Glu Leu His Pro Ser Arg Phe Cys Glu Lys Asp Leu Leu  
565 570 575

Lys Val Val Asp Arg Glu Gln Val Tyr Thr Tyr Ala Asp Asp Pro Cys  
580 585 590

Ser Ala Thr Tyr Pro Leu Ile Gln Lys Leu Arg Gln Val Ile Val Asp  
595 600 605

His Ala Leu Ile Asn Gly Glu Ser Glu Lys Asn Ala Val Thr Ser Ile  
610 615 620

Phe His Lys Ile Gly Ala Phe Glu Glu Glu Leu Lys Ala Val Leu Pro  
625 630 635 640

Lys Glu Val Glu Ala Ala Arg Ala Ala Tyr Asp Asn Gly Thr Ser Ala  
645 650 655

Ile Pro Asn Arg Ile Lys Glu Cys Arg Ser Tyr Pro Leu Tyr Arg Phe  
 660 665 670

Val Arg Glu Glu Leu Gly Thr Glu Leu Leu Thr Gly Glu Lys Val Thr  
 675 680 685

Ser Pro Gly Glu Glu Phe Asp Lys Val Phe Thr Ala Ile Cys Glu Gly  
 690 695 700

Lys Ile Ile Asp Pro Met Met Glu Cys Leu Asn Glu Trp Asn Gly Ala  
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Pro Ile Pro Ile Cys  
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<210> 1543

<211> 1368

<212> DNA

<213> Arabidopsis thaliana

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 cccaagaaag ctctgaaaca gttggaaaat ctcaatctgt ttccacacaa cattgtcttt 180  
 cgctctgtca ccgtccctca tgtggatggt ctccccgttg gcacagagac agtctctgag 240  
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 gaaggtgtgg tccgagccgt ggaaccggac ctgatcttct ttgacttcgc tcattggatt 360  
 ccagaggtag ctgagagactt tggccttaag actgtaaagt acgtcgtggt atctgcatcg 420  
 actatagcta gtatgcttgg tccaggtggt gagttagggt ttccctccgcc gggatatcct 480  
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 gatgtcattg cgataaggac agccagagaa atcgaaggaa acttttgcga ctatatcgaa 660  
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<210> 1544

<211> 455

<212> PRT

<213> Arabidopsis thaliana

<400> 1544

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20 25 30

Gly His Thr Val Thr Phe Leu Ile Pro Lys Lys Ala Leu Lys Gln Leu  
35 40 45

Glu Asn Leu Asn Leu Phe Pro His Asn Ile Val Phe Arg Ser Val Thr  
50 55 60

Val Pro His Val Asp Gly Leu Pro Val Gly Thr Glu Thr Val Ser Glu  
65 70 75 80

Ile Pro Val Thr Ser Ala Asp Leu Leu Met Ser Ala Met Asp Leu Thr  
85 90 95

Arg Asp Gln Val Glu Gly Val Val Arg Ala Val Glu Pro Asp Leu Ile  
100 105 110

Phe Phe Asp Phe Ala His Trp Ile Pro Glu Val Ala Arg Asp Phe Gly  
115 120 125

Leu Lys Thr Val Lys Tyr Val Val Val Ser Ala Ser Thr Ile Ala Ser  
130 135 140

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Met Leu Val Pro Gly Gly Glu Leu Gly Val Pro Pro Pro Gly Tyr Pro  
145 150 155 160

Ser Ser Lys Val Leu Leu Arg Lys Gln Asp Ala Tyr Thr Met Lys Asn  
165 170 175

Leu Glu Ser Thr Asn Thr Ile Asn Val Gly Pro Asn Leu Leu Glu Arg  
180 185 190

Val Thr Thr Ser Leu Met Asn Ser Asp Val Ile Ala Ile Arg Thr Ala  
195 200 205

Arg Glu Ile Glu Gly Asn Phe Cys Asp Tyr Ile Glu Lys His Cys Arg  
210 215 220

Lys Lys Val Leu Leu Thr Gly Pro Val Phe Pro Glu Pro Asp Lys Thr  
225 230 235 240

Arg Glu Leu Glu Glu Arg Trp Val Lys Trp Leu Ser Gly Tyr Glu Pro  
245 250 255

Asp Ser Val Val Phe Cys Ala Leu Gly Ser Gln Val Ile Leu Glu Lys  
260 265 270

Asp Gln Phe Gln Glu Leu Cys Leu Gly Met Glu Leu Thr Gly Ser Pro  
275 280 285

Phe Leu Val Ala Val Lys Pro Pro Arg Gly Ser Ser Thr Ile Gln Glu  
290 295 300

Ala Leu Pro Glu Gly Phe Glu Glu Arg Val Lys Gly Arg Gly Val Val  
305 310 315 320

Trp Gly Glu Trp Val Gln Gln Pro Leu Leu Leu Ser His Pro Ser Val  
325 330 335

Gly Cys Phe Val Ser His Cys Gly Phe Gly Ser Met Trp Glu Ser Leu  
340 345 350

Leu Ser Asp Cys Gln Ile Val Leu Val Pro Gln Leu Gly Asp Gln Val  
355 360 365

Leu Asn Thr Arg Leu Leu Ser Asp Glu Leu Lys Val Ser Val Glu Val  
370 375 380

Ala Arg Glu Glu Thr Gly Trp Phe Ser Lys Glu Ser Leu Phe Asp Ala  
385 390 395 400

047-E2F-PCT.ST25.txt

Ile Asn Ser Val Met Lys Arg Asp Ser Glu Ile Gly Asn Leu Val Lys  
405 410 415

Lys Asn His Thr Lys Trp Arg Glu Thr Leu Thr Ser Pro Gly Leu Val  
420 425 430

Thr Gly Tyr Val Asp Asn Phe Ile Glu Ser Leu Gln Asp Leu Val Ser  
435 440 445

Gly Thr Asn His Val Ser Lys  
450 455

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<211> 1191

<212> DNA

<213> Arabidopsis thaliana

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aattccatga acaaggtggt gtttgacta tttgcaccgg ctctcatggt tgccaatcta 180  
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<211> 396

<212> PRT

<213> Arabidopsis thaliana

<400> 1546

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Lys Leu Phe Pro Val Glu Ala Arg Asn Ser Met Asn Lys Val Val Phe  
35 40 45

Val Leu Phe Ala Pro Ala Leu Met Phe Ala Asn Leu Ala Gln Thr Val  
50 55 60

Thr Leu Glu Asp Ile Ile Ser Trp Trp Phe Met Pro Val Asn Met Gly  
65 70 75 80

Leu Thr Phe Leu Ile Gly Gly Leu Leu Gly Trp Leu Val Val Lys Ile  
85 90 95

Leu Lys Pro Pro Pro Tyr Leu Glu Gly Leu Ile Val Ala Thr Cys Ser  
100 105 110

Ala Gly Asn Met Gly Asn Leu Pro Ile Ile Leu Val Pro Ala Ile Cys  
115 120 125

Asp Glu Asp Lys Ser Pro Phe Gly Asn Arg Ser Val Cys Arg Thr Val  
130 135 140

Gly Leu Ser Tyr Ala Ser Phe Ser Met Ala Leu Gly Gly Phe Tyr Ile  
145 150 155 160

Trp Thr Tyr Thr Phe Arg Leu Ile Lys Gly Ser Ala Met Lys Val Gln  
165 170 175

Ala Ile Glu Glu Ser Glu Lys Ile Ala Ile Lys Ser Ser Asn Ser Asp  
Page 2363

Leu Glu Ala Asp His Lys Thr His Leu Leu Gly Ala Pro Glu Asp Lys  
195 200

Glu Asn Lys Val Val Lys Glu Lys Thr Gly Phe Trp Arg Lys Gly Val  
210 215

Asp Phe Leu His Glu Ile Leu Glu Glu Leu Leu Ala Pro Pro Thr Leu  
225 230 235 240

Gly Ala Ile Ile Gly Phe Ile Phe Gly Ala Val Arg Trp Leu Arg Asn  
245 250 255

Leu Ile Ile Gly Asp Asp Ala Pro Leu Arg Ile Val Gln Ser Thr Ala  
260 265 270

Lys Leu Leu Gly Asp Gly Thr Ile Pro Cys Met Thr Ile Ile Leu Gly  
275 280 285

Gly Asn Leu Ile Gln Gly Leu Arg Ser Ser Ala Val Lys Pro Met Val  
290 295 300

Val Leu Gly Ile Val Cys Val Arg Tyr Ile Ala Met Pro Ile Ile Gly  
305 310 315 320

Ile Gly Ile Val Leu Thr Ala Ala Asn Leu Gly Phe Leu Pro Ala Asp  
325 330 335

Pro Leu Phe Gln Tyr Val Leu Met Leu Gln Phe Thr Leu Pro Pro Ala  
340 345 350

Met Asn Ile Gly Thr Met Thr Gln Leu Tyr Asn Val Ala Gln Asp Glu  
355 360 365

Cys Ser Val Leu Met Leu Trp Thr Tyr Leu Val Ala Ile Leu Ala Leu  
370 375 380

Thr Val Trp Ser Thr Ile Phe Leu His Leu Leu Val  
385 390 395

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<211> 870

<212> DNA

<213> Arabidopsis thaliana

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 aaggaatggt acttcttctc tcccagggac agaaaatata ccaacggttc gcgtcctaac 240  
 cgggtccgctg gttctggtta ctggaaagct accggagctg ataaaccgat cggactacct 300  
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 aagaagaata gtctcaggct ggatgattgg gttctctgcc ggatttacia caaaaaagga 480  
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 cagggtggtg cgccggagtt cagcagcgag gttcagagcg agcccaagtg gaaagattgg 720  
 tcggcgcgtaa gtaatgacaa taacaatacc cttgattttg ggtttaatta cattgatgcc 780  
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<210> 1548  
 <211> 289  
 <212> PRT  
 <213> Arabidopsis thaliana

<400> 1548  
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 Asp Glu Glu Leu Val Met His Tyr Leu Cys Arg Lys Cys Ala Ser Gln  
 20 25 30  
 Ser Ile Ala Val Pro Ile Ile Ala Glu Ile Asp Leu Tyr Lys Tyr Asp  
 35 40 45  
 Pro Trp Glu Leu Pro Gly Leu Ala Leu Tyr Gly Glu Lys Glu Trp Tyr  
 50 55 60  
 Phe Phe Ser Pro Arg Asp Arg Lys Tyr Pro Asn Gly Ser Arg Pro Asn  
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65                      70                      75                      80  
 Arg Ser Ala Gly Ser Gly Tyr Trp Lys Ala Thr Gly Ala Asp Lys Pro  
                                  85                                   90                                   95  
 Ile Gly Leu Pro Lys Pro Val Gly Ile Lys Lys Ala Leu Val Phe Tyr  
                                  100                                   105                                   110  
 Ala Gly Lys Ala Pro Lys Gly Glu Lys Thr Asn Trp Ile Met His Glu  
                                  115                                   120                                   125  
 Tyr Arg Leu Ala Asp Val Asp Arg Ser Val Arg Lys Lys Asn Ser  
                                  130                                   135                                   140  
 Leu Arg Leu Asp Asp Trp Val Leu Cys Arg Ile Tyr Asn Lys Lys Gly  
                                  145                                   150                                   155                                   160  
 Ala Thr Glu Arg Arg Gly Pro Pro Pro Pro Val Val Tyr Gly Asp Glu  
                                  165                                   170                                   175  
 Ile Met Glu Glu Lys Pro Lys Val Thr Glu Met Val Met Pro Pro Pro  
                                  180                                   185                                   190  
 Pro Gln Gln Thr Ser Glu Phe Ala Tyr Phe Asp Thr Ser Asp Ser Val  
                                  195                                   200                                   205  
 Pro Lys Leu His Thr Thr Asp Ser Ser Cys Ser Glu Gln Val Val Ser  
                                  210                                   215                                   220  
 Pro Glu Phe Thr Ser Glu Val Gln Ser Glu Pro Lys Trp Lys Asp Trp  
                                  225                                   230                                   235                                   240  
 Ser Ala Val Ser Asn Asp Asn Asn Asn Thr Leu Asp Phe Gly Phe Asn  
                                  245                                   250                                   255  
 Tyr Ile Asp Ala Thr Val Asp Asn Ala Phe Gly Gly Gly Gly Ser Ser  
                                  260                                   265                                   270  
 Asn Gln Met Phe Pro Leu Gln Asp Met Phe Met Tyr Met Gln Lys Pro  
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&lt;210&gt; 1549

&lt;211&gt; 447

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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&lt;210&gt; 1550

&lt;211&gt; 148

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1550

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20     25     30
Trp Gln Ala Thr Ile Met Gly Pro Ala Asp Ser Pro Phe Ala Gly Gly
35     40     45
Val Phe Leu Val Thr Ile His Phe Pro Pro Asp Tyr Pro Phe Lys Pro
50     55     60
Pro Lys Val Ala Phe Arg Thr Lys Val Tyr His Pro Asn Ile Asn Ser
65     70     75     80
Asn Gly Ser Ile Cys Leu Asp Ile Leu Lys Glu Gln Trp Ser Pro Ala
85     90     95
Leu Thr Val Ser Lys Val Leu Leu Ser Ile Cys Ser Leu Leu Thr Asp
100    105    110

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047-E2F-PCT.ST25.txt

Pro Asn Pro Asp Asp Pro Leu Val Pro Glu Ile Ala His Ile Tyr Lys  
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Thr Asp Arg Val Lys Tyr Glu Ser Thr Ala Gln Ser Trp Thr Gln Lys  
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<211> 870

<212> DNA

<213> Arabidopsis thaliana

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<210> 1552

<211> 289

<212> PRF

<213> Arabidopsis thaliana

&lt;400&gt; 1552

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      20      25      30
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      35      40      45
Ala Ala Lys Trp Asn Ser Pro Ala Ser Arg Phe Ala Arg Asn Val Ala
      50      55      60
Ile Thr Ser Glu Phe Glu Val Glu Glu Asp Gly Phe Ala Asp Val Ala
65      70      75      80
Pro Pro Lys Glu Gln Ser Phe Ser Ala Asp Leu Lys Leu Phe Val Gly
      85      90      95
Asn Leu Pro Phe Asn Val Asp Ser Ala Gln Leu Ala Gln Leu Phe Glu
      100      105      110
Ser Ala Gly Asn Val Glu Met Val Glu Val Ile Tyr Asp Lys Ile Thr
      115      120      125
Gly Arg Ser Arg Gly Phe Gly Phe Val Thr Met Ser Ser Val Ser Glu
      130      135      140
Val Glu Ala Ala Ala Gln Gln Phe Asn Gly Tyr Glu Leu Asp Gly Arg
145      150      155      160
Pro Leu Arg Val Asn Ala Gly Pro Pro Pro Pro Lys Arg Glu Asp Gly
      165      170      175
Phe Ser Arg Gly Pro Arg Ser Ser Phe Gly Ser Ser Gly Ser Gly Tyr
      180      185      190
Gly Gly Gly Gly Ser Gly Ala Gly Ser Gly Asn Arg Val Tyr Val
      195      200      205
Gly Asn Leu Ser Trp Gly Val Asp Asp Met Ala Leu Glu Ser Leu Phe
      210      215      220
Ser Glu Gln Gly Lys Val Val Glu Ala Arg Val Ile Tyr Asp Arg Asp
225      230      235      240

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047-E2F-PCT.ST25.txt

Ser Gly Arg Ser Lys Gly Phe Gly Phe Val Thr Tyr Asp Ser Ser Gln  
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275 280 285

Tyr

<210> 1553

<211> 2010

<212> DNA

<213> Arabidopsis thaliana

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<210> 1554

<211> 669

<212> PRT

<213> Arabidopsis thaliana

<400> 1554

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Tyr Lys Ile Val Val Leu Asp Lys Leu Asp Tyr Cys Ser Asn Leu Lys  
 35 40 45

Asn Leu Asn Pro Ser Lys His Ser Pro Asn Phe Lys Phe Val Lys Gly  
 50 55 60

Asp Ile Ala Ser Ala Asp Leu Val Asn His Leu Leu Ile Thr Glu Gly  
 Page 2371

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Val	Leu	Leu 115	Glu	Ala	Cys	Lys	Val 120	Thr	Gly	Gln	Ile	Arg 125	Arg	Phe	Ile						
His	Val 130	Ser	Thr	Asp	Glu	Val 135	Tyr	Gly	Glu	Thr	Asp 140	Glu	Asp	Ala	Leu						
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Ala	Thr	Lys	Ala	Gly 165	Ala	Glu	Met	Leu	Val 170	Met	Ala	Tyr	Gly	Arg 175	Ser						
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Asn	Gln	Phe 195	Pro	Glu	Lys	Leu	Ile 200	Pro	Lys	Phe	Ile	Leu 205	Leu	Ala	Met						
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Lys	Gly	Glu	Val	Gly 245	His	Val	Tyr	Asn	Ile 250	Gly	Thr	Lys	Lys	Glu 255	Arg						
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Arg	Tyr 290	Phe	Leu	Asp	Asp	Gln 295	Lys	Leu	Lys	Lys	Leu 300	Gly	Trp	Ser	Glu						
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047-E2F-PCT.ST25.txt

Gln Asn Pro Glu Trp Trp Gly Asp Val Ser Gly Ala Leu Pro His  
325 330

Pro Arg Met Leu Met Met Pro Gly Gly Arg His Phe Asp Gly Ser Glu  
340 345 350

Asp Asn Ser Leu Ala Ala Thr Leu Ser Glu Lys Pro Ser Gln Thr His  
355 360 365

Met Val Val Pro Ser Gln Arg Ser Asn Gly Thr Pro Gln Lys Pro Ser  
370 375 380

Leu Lys Phe Leu Ile Tyr Gly Lys Thr Gly Trp Ile Gly Gly Leu Leu  
385 390 395 400

Gly Lys Ile Cys Asp Lys Gln Gly Ile Ala Tyr Glu Tyr Gly Lys Gly  
405 410 415

Arg Leu Glu Asp Arg Ser Ser Leu Leu Gln Asp Ile Gln Ser Val Lys  
420 425 430

Pro Thr His Val Phe Asn Ser Ala Gly Val Thr Gly Arg Pro Asn Val  
435 440 445

Asp Trp Cys Glu Ser His Lys Thr Glu Thr Ile Arg Ala Asn Val Ala  
450 455 460

Gly Thr Leu Thr Leu Ala Asp Val Cys Arg Glu His Gly Leu Leu Met  
465 470 475 480

Met Asn Phe Ala Thr Gly Cys Ile Phe Glu Tyr Asp Asp Lys His Pro  
485 490 495

Glu Gly Ser Gly Ile Gly Phe Lys Glu Glu Asp Thr Pro Asn Phe Thr  
500 505 510

Gly Ser Phe Tyr Ser Lys Thr Lys Ala Met Val Glu Glu Leu Leu Lys  
515 520 525

Glu Tyr Asp Asn Val Cys Thr Leu Arg Val Arg Met Pro Ile Ser Ser  
530 535 540

Asp Leu Asn Asn Pro Arg Asn Phe Ile Thr Lys Ile Ser Arg Tyr Asn  
545 550 555 560

Lys Val Val Asn Ile Pro Asn Ser Met Thr Val Leu Asp Glu Leu Leu  
565 570 575

047-E2F-PCT.ST25.txt

Pro Ile Ser Ile Glu Met Ala Lys Arg Asn Leu Lys Gly Ile Trp Asn  
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Phe Thr Asn Pro Gly Val Val Ser His Asn Glu Ile Leu Glu Met Tyr  
595 600 605

Arg Asp Tyr Ile Asn Pro Glu Phe Lys Trp Ala Asn Phe Thr Leu Glu  
610 615 620

Glu Gln Ala Lys Val Ile Val Ala Pro Arg Ser Asn Asn Glu Met Asp  
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Ala Ser Lys Leu Lys Lys Glu Phe Pro Glu Leu Leu Ser Ile Lys Glu  
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<211> 1431

<212> DNA

<213> Arabidopsis thaliana

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047-E2F-PCT.ST25.txt

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<210> 1556

<211> 476

<212> PRT

<213> Arabidopsis thaliana

<400> 1556

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20 25 30
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Arg Leu Ala Ala Pro Met Ala Thr Val Thr Ile Ala Gln Tyr Leu Leu
35 40 45
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Pro Val Ile Ser Val Met Val Ala Gly His Asn Gly Glu Leu Gln Leu
50 55 60
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Ser Gly Val Ala Leu Ala Asn Ser Phe Thr Asn Val Thr Gly Phe Ser
65 70 75 80
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Ile Met Cys Gly Leu Val Gly Ala Leu Glu Thr Leu Cys Gly Gln Ala
85 90 95
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```
Tyr Gly Ala Lys Gln Tyr Glu Lys Ile Gly Thr Tyr Ala Tyr Ser Ala
100 105 110
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Ile Ala Ser Asn Ile Pro Ile Cys Phe Leu Ile Ser Ile Leu Trp Leu
Page 2375
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 180 185 190  
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 Ser Cys Tyr Val Arg Phe Ser Ser Ser Cys Glu Lys Thr Arg Gly Phe  
 225 230 235 240  
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 275 280 285  
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 305 310 315 320  
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 325 330 335  
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 340 345 350  
 Arg Asn Ile Ile Gly Tyr Ala Phe Ser Asn Ser Lys Glu Val Leu Asp  
 355 360 365

Tyr Val Ala Asp Leu Thr Pro Leu Leu Cys Leu Ser Phe Ile Leu Asp  
 370 375 380

Gly Phe Thr Ala Val Leu Asn Gly Val Ala Arg Gly Ser Gly Trp Gln  
 385 390 395 400

His Ile Gly Ala Trp Asn Asn Thr Val Ser Tyr Tyr Leu Val Gly Ala  
 405 410 415

Pro Val Gly Ile Tyr Leu Ala Phe Ser Arg Glu Leu Asn Gly Lys Gly  
 420 425 430

Leu Trp Cys Gly Val Val Val Gly Ser Thr Val Gln Ala Thr Ile Leu  
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<210> 1557

<211> 2190

<212> DNA

<213> Arabidopsis thaliana

<400> 1557

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&lt;210&gt; 1558

&lt;211&gt; 729

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1558



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 Trp Thr Phe Arg Met Trp Phe Leu Gly Leu Ile Ser Cys Ser Leu Leu  
 35 40 45  
 Ser Phe Leu Asn Gln Phe Phe Ser Tyr Arg Thr Glu Pro Leu Val Ile  
 50 55 60  
 Thr Gln Ile Thr Val Gln Val Ala Thr Leu Pro Ile Gly His Phe Leu  
 65 70 75 80  
 Ala Lys Val Leu Pro Lys Thr Arg Phe Gly Leu Pro Gly Cys Gly Ser  
 85 90 95  
 Ala Arg Phe Ser Leu Asn Pro Gly Pro Phe Asn Met Lys Glu His Val  
 100 105 110  
 Leu Ile Ser Ile Phe Ala Asn Ala Gly Ser Ala Phe Gly Ser Gly Ser  
 115 120 125  
 Ala Tyr Ala Val Gly Ile Ile Thr Ile Ile Lys Ala Phe Tyr Gly Arg  
 130 135 140  
 Ser Ile Ser Phe Ile Ala Gly Trp Leu Leu Ile Ile Thr Thr Gln Val  
 145 150 155 160  
 Leu Gly Tyr Gly Trp Ala Gly Leu Leu Arg Lys Tyr Val Val Glu Pro  
 165 170 175  
 Ala His Met Trp Trp Pro Ser Thr Leu Val Gln Val Ser Leu Phe Arg  
 180 185 190  
 Ala Leu His Glu Lys Asp Asp Gln Arg Met Thr Arg Ala Lys Phe Phe  
 195 200 205  
 Val Ile Ala Leu Val Cys Ser Phe Gly Trp Tyr Ile Val Pro Gly Tyr  
 210 215 220  
 Leu Phe Thr Thr Leu Thr Ser Ile Ser Trp Val Cys Trp Ala Phe Pro  
 225 230 235 240  
 Arg Ser Val Thr Ala Gln Gln Ile Gly Ser Gly Met Arg Gly Leu Gly  
 245 250 255

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Leu Gly Ala Phe Thr Leu Asp Trp Thr Ala Val Ala Ser Phe Leu Phe  
 260 265 270  
 Ser Pro Leu Ile Ser Pro Phe Phe Ala Ile Ala Asn Val Phe Ile Gly  
 275 280 285  
 Tyr Val Leu Leu Ile Tyr Phe Val Leu Pro Leu Ala Tyr Trp Gly Phe  
 290 295 300  
 Asp Ser Tyr Asn Ala Thr Arg Phe Pro Ile Phe Ser Ser His Leu Phe  
 305 310 315  
 Thr Ser Val Gly Asn Thr Tyr Asp Ile Pro Ala Ile Val Asn Asp Asn  
 325 330 335  
 Phe Glu Leu Asp Leu Ala Lys Tyr Glu Gln Gln Gly Arg Ile Asn Leu  
 340 345 350  
 Ser Met Phe Phe Ala Leu Thr Tyr Gly Leu Gly Phe Ala Thr Ile Ala  
 355 360 365  
 Ser Thr Leu Thr His Val Ala Leu Phe Tyr Gly Lys Glu Ile Ser Glu  
 370 375 380  
 Arg Phe Arg Val Ser Tyr Lys Gly Lys Glu Asp Ile His Thr Arg Leu  
 385 390 395 400  
 Met Lys Arg Tyr Lys Asp Ile Pro Ser Trp Trp Phe Tyr Ser Met Leu  
 405 410 415  
 Ala Ala Thr Leu Leu Ile Ser Leu Ala Leu Cys Val Phe Leu Asn Asp  
 420 425 430  
 Glu Val Gln Met Pro Trp Trp Gly Leu Val Phe Ala Ser Ala Met Ala  
 435 440 445  
 Phe Val Phe Thr Leu Pro Ile Ser Ile Ile Thr Ala Thr Thr Asn Gln  
 450 455 460  
 Thr Pro Gly Leu Asn Ile Ile Thr Glu Tyr Ala Met Gly Leu Ile Tyr  
 465 470 475 480  
 Pro Gly Arg Pro Ile Ala Asn Val Cys Phe Lys Val Tyr Gly Tyr Met  
 485 490 495  
 Ser Met Ala Gln Ala Val Ser Phe Leu Asn Asp Phe Lys Leu Gly His  
 500 505 510

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Tyr Met Lys Ile Pro Pro Arg Ser Met Phe Leu Val Gln Phe Ile Gly  
 515 520 525  
 Thr Ile Leu Ala Gly Thr Ile Asn Ile Thr Val Ala Trp Trp Gln Leu  
 530 535 540  
 Asn Ser Ile Lys Asn Ile Cys Gln Glu Glu Leu Leu Pro Pro Asn Ser  
 545 550 555 560  
 Pro Trp Thr Cys Pro Gly Asp Arg Val Phe Phe Asp Ala Ser Val Ile  
 565 570 575  
 Trp Gly Leu Val Gly Pro Lys Arg Ile Phe Gly Ser Gln Gly Asn Tyr  
 580 585 590  
 Ala Ala Met Asn Trp Phe Phe Leu Gly Gly Ala Leu Gly Pro Val Ile  
 595 600 605  
 Val Trp Ser Leu His Lys Ala Phe Pro Lys Arg Ser Trp Ile Pro Leu  
 610 615 620  
 Val Asn Leu Pro Val Leu Leu Gly Ala Thr Ala Met Met Pro Pro Ala  
 625 630 635 640  
 Thr Ala Val Asn Tyr Asn Ser Trp Ile Leu Val Gly Thr Ile Phe Asn  
 645 650 655  
 Leu Phe Val Phe Arg Tyr Arg Lys Ser Trp Trp Gln Arg Tyr Asn Tyr  
 660 665 670  
 Val Leu Ser Ala Ala Met Asp Ala Gly Val Ala Phe Met Ala Val Leu  
 675 680 685  
 Leu Tyr Phe Ser Val Gly Met Glu Glu Lys Ser Leu Asp Trp Trp Gly  
 690 695 700  
 Thr Arg Gly Glu His Cys Asp Leu Ala Lys Cys Pro Thr Ala Arg Gly  
 705 710 715 720  
 Val Ile Val Asp Gly Cys Pro Val Lys  
 725

<210> 1559

<211> 771

<212> DNA

<213> *Arabidopsis thaliana*

<400> 1559  
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 aagtctttgt cttacaaga actcaaaaa cgactcaaac tcatcggttc caaaaccgcc 120  
 gatcgtcccg ttaaacgact ccgttttagat gagttttccg tcggaatcgc gaaagaagag 180  
 atcaatttca tccaattgtt agaagacgag ttggagaaat tcaacaattt ctctgttgag 240  
 aaggaagaag aatatatcat cagactaaag gaatttagag atagaattgc gaaagctaag 300  
 gattcaatgg agaagatgat aaaaatcagg aaggagattg ttgatttcca tggagaatg 360  
 gttcttcttg agaattacag tgctcttaat tacactggat tggtaagat actgaagaag 420  
 tatgacaaaa gaactggtga tctcatgcgt ttacctttca tccagaaagt tcttcagcaa 480  
 cttttttaca ctactgactt attgttcaag cttgtcaagg aatctgaggc aatgcttgat 540  
 cagatcttcc ctgctaacga aactgagtct gagattatcc aagcagagtt atcagagcat 600  
 aagttcatgg agagtcttca tatgaagagc acaatcgctg ccttgcgggt ttgaaggag 660  
 atcaggagtg gaagttctac tgtagtggtg ttttcattgc cgctctaca gttaaatggc 720  
 tttagtgaga catggaagaa gattccattg ttggagcaag aagccaaata g 771

&lt;210&gt; 1560

&lt;211&gt; 256

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1560

Met Lys Phe Gly Lys Ser Leu Ser Asn Gln Ile Glu Gln Thr Leu Pro  
 1 5 10 15

Glu Trp Gln Asp Lys Phe Leu Ser Tyr Lys Glu Leu Lys Lys Arg Leu  
 20 25 30

Lys Leu Ile Gly Ser Lys Thr Ala Asp Arg Pro Val Lys Arg Leu Arg  
 35 40 45

Leu Asp Glu Phe Ser Val Gly Ile Ser Lys Glu Glu Ile Asn Phe Ile  
 50 55 60

Gln Leu Leu Glu Asp Glu Leu Glu Lys Phe Asn Asn Phe Phe Val Glu  
 65 70 75 80

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Lys Glu Glu Glu Tyr Ile Ile Arg Leu Lys Glu Phe Arg Asp Arg Ile  
85 90 95

Ala Lys Ala Lys Asp Ser Met Glu Lys Met Ile Lys Ile Arg Lys Glu  
100 105 110

Ile Val Asp Phe His Gly Glu Met Val Leu Leu Glu Asn Tyr Ser Ala  
115 120 125

Leu Asn Tyr Thr Gly Leu Val Lys Ile Leu Lys Lys Tyr Asp Lys Arg  
130 135 140

Thr Gly Asp Leu Met Arg Leu Pro Phe Ile Gln Lys Val Leu Gln Gln  
145 150 155 160

Pro Phe Tyr Thr Thr Asp Leu Leu Phe Lys Leu Val Lys Glu Ser Glu  
165 170 175

Ala Met Leu Asp Gln Ile Phe Pro Ala Asn Glu Thr Glu Ser Glu Ile  
180 185 190

Ile Gln Ala Glu Leu Ser Glu His Lys Phe Met Glu Ser Leu His Met  
195 200 205

Lys Ser Thr Ile Ala Ala Leu Arg Val Leu Lys Glu Ile Arg Ser Gly  
210 215 220

Ser Ser Thr Val Ser Val Phe Ser Leu Pro Pro Leu Gln Leu Asn Gly  
225 230 235 240

Leu Asp Glu Thr Trp Lys Lys Ile Pro Leu Leu Glu Gln Glu Ala Lys  
245 250 255

<210> 1561

<211> 783

<212> DNA

<213> Arabidopsis thaliana

<400> 1561  
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atcttcagtc accgtcacca ccaccaccac cgtttctgca acaatctctt gaatagaaga 120  
atttagtgtc ctggaagtc cgctattagt gacggtggtg tctctacaa tactctagtc 180

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tccgaggcgg tgaggctttt ggttcacaa gcaaactttg attcttcaaa gcttaaagtt 240
gagttcttag gagagttatt ggagaacaag agtaacggag gaattattac gccgcggact 300
tatattcttt cgcattgtga cttcactgct aacttaacgt taacaatctc aaacgttatc 360
aatctggatc aactagaagg ctggtacaag aaagatgatg tggttgtgga gtggaagaag 420
gtgaatgatg agctgcggtt acatattcat tgttgtgtga gtggtatgag ttatttgacg 480
gatgttgctg ctgagcttag gtatcatatt ttctccaagg aattgccttt ggtacttaaa 540
gctgtgggtc atggagattc agttatgttt agagagaatc ctgagctaataa ggatgcttat 600
gtatgggttt atttccattc aagcacacct aagtacaatc ggatcgatg ttggggacct 660
cttaaggatg ctgcgaaggg aaagcagcag ggcaatcatc aaggcttctt gagttcgacg 720
acttcgagga aattgattcg acataagtct atcttcata ccttatttac gtttcttctg 780
tga 783

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&lt;210&gt; 1562

&lt;211&gt; 260

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1562

```

Met Ala Cys Tyr Ile Val Pro Tyr Tyr His His Pro Val Leu Ser His
1      5      10

```

```

Pro Asn Arg Glu Ile Phe Ser His Arg His His His His Arg Phe
20      25      30

```

```

Cys Asn Asn Leu Leu Asn Arg Arg Ile Ser Val Pro Arg Ser Ser Ala
35      40      45

```

```

Ile Ser Asp Gly Gly Val Ser Tyr Asn Thr Leu Val Ser Glu Ala Val
50      55      60

```

```

Arg Leu Leu Val Pro Gln Ala Asn Phe Asp Ser Ser Lys Leu Lys Val
65      70      75      80

```

```

Glu Phe Leu Gly Glu Leu Leu Glu Asn Lys Ser Asn Gly Gly Ile Ile
85      90      95

```

```

Thr Pro Arg Thr Tyr Ile Leu Ser His Cys Asp Phe Thr Ala Asn Leu
100     105     110

```

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Thr Leu Thr Ile Ser Asn Val Ile Asn Leu Asp Gln Leu Glu Gly Trp  
115 120 125

Tyr Lys Lys Asp Asp Val Val Ala Glu Trp Lys Lys Val Asn Asp Glu  
130 135 140

Leu Arg Leu His Ile His Cys Cys Val Ser Gly Met Ser Leu Leu Gln  
145 150 155 160

Asp Val Ala Ala Glu Leu Arg Tyr His Ile Phe Ser Lys Glu Leu Pro  
165 170 175

Leu Val Leu Lys Ala Val Val His Gly Asp Ser Val Met Phe Arg Glu  
180 185 190

Asn Pro Glu Leu Met Asp Ala Tyr Val Trp Val Tyr Phe His Ser Ser  
195 200 205

Thr Pro Lys Tyr Asn Arg Ile Glu Cys Trp Gly Pro Leu Lys Asp Ala  
210 215 220

Ala Lys Gly Lys Gln Gln Gly Asn His Gln Gly Phe Leu Ser Ser Thr  
225 230 235 240

Thr Ser Arg Lys Leu Ile Arg His Lys Ser Ile Phe His Thr Leu Phe  
245 250 255

Thr Phe Leu Leu  
260

<210> 1563

<211> 906

<212> DNA

<213> Arabidopsis thaliana

<400> 1563  
atggcggatc gtgttaaagg tccatggagt caagaagaag atgagcagct acgaaggatg 60  
gttgagaaat acggaccgag gaattggtct gcgattagca aatcgattcc aggtcgatct 120  
ggtaaatcgt gtagattacg ttggtgtaat cagttatctc cggagggtga gcatcgctct 180  
ttctgccgg aggaagatga gactattgta accgccgtg ctcagtttgg taacaagtgg 240  
gcgacgattg ctctgtctct taacggctcgt acggataacg ccgttaaaaa tcactggaac 300  
tctacgctta agaggaaatg cagcggaggt gtggcggtta cgacggtgac ggagacggag 360

```

gaagatcagg atcggccgaa gaagaggaga tctgttagct ttgattctgc ttttctccg 420
gtggatactg gattgtacat gagtccctgag agtcctaacg gaatcgatgt tagtgattct 480
agcagcattc cgtcaccgtc gtctcctggt gctcagctgt ttaaaccaat gccgatttcc 540
ggcgggtttta cggtggttcc gcagccgtta ccggttgaaa tgtcttcgtc ttcggaggat 600
ccacctactt cgttgagttt gtctactact ggagctgaga acacgagttc gagccataac 660
aataacaaca acgcgttgat gtttccgaga ttgagagtc agatgaagat taatgtagag 720
gagagaggag aaggacgtag aggtgagttt atgacgggtg tgcaggagat gataaaagct 780
gaagtgagga gttacatggc ggaatgcag aaaacaagtg gtggattcgt cgtcggagggt 840
ttatacgaat ccggcggcaa tggtggtttt agggattgtg gagtaataac acctaagggt 900
gagtag 906

```

&lt;210&gt; 1564

&lt;211&gt; 301

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1564

```

Met Ala Asp Arg Val Lys Gly Pro Trp Ser Gln Glu Glu Asp Glu Gln
1      5      10

```

```

Leu Arg Arg Met Val Glu Lys Tyr Gly Pro Arg Asn Trp Ser Ala Ile
20      25      30

```

```

Ser Lys Ser Ile Pro Gly Arg Ser Gly Lys Ser Cys Arg Leu Arg Trp
35      40      45

```

```

Cys Asn Gln Leu Ser Pro Glu Val Glu His Arg Pro Phe Ser Pro Glu
50      55      60

```

```

Glu Asp Glu Thr Ile Val Thr Ala Arg Ala Gln Phe Gly Asn Lys Trp
65      70      75      80

```

```

Ala Thr Ile Ala Arg Leu Leu Asn Gly Arg Thr Asp Asn Ala Val Lys
85      90      95

```

```

Asn His Trp Asn Ser Thr Leu Lys Arg Lys Cys Ser Gly Gly Val Ala
100     105     110

```

```

Val Thr Thr Val Thr Glu Thr Glu Glu Asp Gln Asp Arg Pro Lys Lys
115     120     125

```



Arg Arg Ser Val Ser Phe Asp Ser Ala Phe Ala Pro Val Asp Thr Gly  
 130 135 140

Leu Tyr Met Ser Pro Glu Ser Pro Asn Gly Ile Asp Val Ser Asp Ser  
 145 150 155 160

Ser Thr Ile Pro Ser Pro Ser Ser Pro Val Ala Gln Leu Phe Lys Pro  
 165 170 175

Met Pro Ile Ser Gly Gly Phe Thr Val Val Pro Gln Pro Leu Pro Val  
 180 185 190

Glu Met Ser Ser Ser Ser Glu Asp Pro Pro Thr Ser Leu Ser Leu Ser  
 195 200 205

Leu Pro Gly Ala Glu Asn Thr Ser Ser Ser His Asn Asn Asn Asn  
 210 215 220

Ala Leu Met Phe Pro Arg Phe Glu Ser Gln Met Lys Ile Asn Val Glu  
 225 230 235 240

Glu Arg Gly Glu Gly Arg Arg Gly Glu Phe Met Thr Val Val Gln Glu  
 245 250 255

Met Ile Lys Ala Glu Val Arg Ser Tyr Met Ala Glu Met Gln Lys Thr  
 260 265 270

Ser Gly Gly Phe Val Val Gly Gly Leu Tyr Glu Ser Gly Gly Asn Gly  
 275 280 285

Gly Phe Arg Asp Cys Gly Val Ile Thr Pro Lys Val Glu  
 290 295 300

<210> 1565

<211> 1542

<212> DNA

<213> Arabidopsis thaliana

<400> 1565	
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gggaaagtca ctagtattgt tataatcgct tgccttggtg cagctattgg tggatccatc	120
tttgatatg acattggaat ctcaggagga gttacatcga tggatgagtt tcttgaggag	180

tttttcaca	cggtttatga	gaagaagaag	caagctcatg	aaagtaatta	ctgcaaatat	240
gataatcaag	gcttagctgc	tttcaacttct	tcactctact	tagctggttt	ggtttcgact	300
ctcgtggctt	cacccatcac	taggaactac	ggtaggcgtag	cgagtattgt	ttgtggtgga	360
atcagctttc	ttattggatc	tggtttgaat	gctggagctg	tgaacttagc	tatgcttctt	420
gccggacgga	tcatgcttgg	tgttgggtatt	ggatttgaa	atcaggcggt	tcctttgtat	480
ttatcagaag	tggcaccaac	tcatctacga	ggtggtttaa	acatgatgtt	tcagtagct	540
acaactatcg	ggatctttac	agcgaacatg	gttaattacg	gtactcaaca	gcttaagcct	600
tggggatgga	gactctctct	tggtttagct	gcttttccag	ctctgcttat	gacgcttggc	660
gggtatttct	tacccgagac	accaaacagt	ttggctgaaa	gaggattaac	agagagaggt	720
cgacgagtct	tagtgaagct	aagagggaaca	gaaaacgtca	acgccgagct	tcaagacatg	780
gtagatgcga	gtgagcttgc	gaattccatc	aaacatccat	tcagaaacat	cttgacagaa	840
cgacacaggc	ctcagtagtg	tatggctatt	tgcatgccaa	tgtttcagat	actcacaggg	900
ataaactcca	ttctcttcta	cgcacctggt	ctgttccaga	caatgggggt	tggaggaaac	960
gcattctctc	attcatcagc	tttaacagga	gctgttcttg	tcctatcaac	atttatttcc	1020
ataggattag	tagacagatt	gggacgaaga	gctcttctca	taactggagg	aatacaaatg	1080
ataatctgtc	aagtcatagt	agcagtgatc	ttaggagtga	aatttggaga	caaccaagag	1140
ctatcaaaa	ggtagctagt	gatcgtagtc	atcttcacat	gcctctttgt	tgtagcgttc	1200
ggatggtcat	ggggctctct	aggttgagacc	atacctagcg	aaatctttcc	gttagagact	1260
cgttcagcgg	ggcagagtat	cacagtagct	gtaaatctcc	tcttcacttt	catcatagct	1320
caagctttcc	ttggctctct	ctgtgcattc	aagtttgaa	tcttcctctt	ctttgctggt	1380
tgggtgacag	taatgactat	ctttgtgtat	ttcctgttgc	ctgaaaccaa	aggagtcca	1440
atagaagaga	tgacactctt	atggagtaaa	cattggttct	ggaaaaaagt	attacctgat	1500
gcaacaaatc	ttgaagatga	gagcaagaat	gtatctgttt	aa		1542

&lt;210&gt; 1566

&lt;211&gt; 513

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1566

Met	Ala	Gly	Gly	Ser	Phe	Gly	Pro	Thr	Gly	Val	Ala	Lys	Glu	Arg	Ala
1				5					10					15	

Glu Gln Tyr Gln Gly Lys Val Thr Ser Tyr Val Ile Ile Ala Cys Leu  
 20 25 30  
 Val Ala Ala Ile Gly Gly Ser Ile Phe Gly Tyr Asp Ile Gly Ile Ser  
 35 40 45  
 Gly Gly Val Thr Ser Met Asp Glu Phe Leu Glu Glu Phe Phe His Thr  
 50 55 60  
 Val Tyr Glu Lys Lys Lys Gln Ala His Glu Ser Asn Tyr Cys Lys Tyr  
 65 70 75 80  
 Asp Asn Gln Gly Leu Ala Ala Phe Thr Ser Ser Leu Tyr Leu Ala Gly  
 85 90 95  
 Leu Val Ser Thr Leu Val Ala Ser Pro Ile Thr Arg Asn Tyr Gly Arg  
 100 105 110  
 Arg Ala Ser Ile Val Cys Gly Gly Ile Ser Phe Leu Ile Gly Ser Gly  
 115 120 125  
 Leu Asn Ala Gly Ala Val Asn Leu Ala Met Leu Leu Ala Gly Arg Ile  
 130 135 140  
 Met Leu Gly Val Gly Ile Gly Phe Gly Asn Gln Ala Val Pro Leu Tyr  
 145 150 155 160  
 Leu Ser Glu Val Ala Pro Thr His Leu Arg Gly Gly Leu Asn Met Met  
 165 170 175  
 Phe Gln Leu Ala Thr Thr Ile Gly Ile Phe Thr Ala Asn Met Val Asn  
 180 185 190  
 Tyr Gly Thr Gln Gln Leu Lys Pro Trp Gly Trp Arg Leu Ser Leu Gly  
 195 200 205  
 Leu Ala Ala Phe Pro Ala Leu Leu Met Thr Leu Gly Gly Tyr Phe Leu  
 210 215 220  
 Pro Glu Thr Pro Asn Ser Leu Val Glu Arg Gly Leu Thr Glu Arg Gly  
 225 230 235 240  
 Arg Arg Val Leu Val Lys Leu Arg Gly Thr Glu Asn Val Asn Ala Glu  
 245 250 255  
 Leu Gln Asp Met Val Asp Ala Ser Glu Leu Ala Asn Ser Ile Lys His  
 260 265 270

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Pro Phe Arg Asn Ile Leu Gln Lys Arg His Arg Pro Gln Leu Val Met  
275 285

Ala Ile Cys Met Pro Met Phe Gln Ile Leu Thr Gly Ile Asn Ser Ile  
290 295 300

Leu Phe Tyr Ala Pro Val Leu Phe Gln Thr Met Gly Phe Gly Gly Asn  
305 310 315 320

Ala Ser Leu Tyr Ser Ser Ala Leu Thr Gly Ala Val Leu Val Leu Ser  
325 330 335

Thr Phe Ile Ser Ile Gly Leu Val Asp Arg Leu Gly Arg Arg Ala Leu  
340 345 350

Leu Ile Thr Gly Gly Ile Gln Met Ile Ile Cys Gln Val Ile Val Ala  
355 360 365

Val Ile Leu Gly Val Lys Phe Gly Asp Asn Gln Glu Leu Ser Lys Gly  
370 375 380

Tyr Ser Val Ile Val Val Ile Phe Ile Cys Leu Phe Val Val Ala Phe  
385 390 395 400

Gly Trp Ser Trp Gly Pro Leu Gly Trp Thr Ile Pro Ser Glu Ile Phe  
405 410 415

Pro Leu Glu Thr Arg Ser Ala Gly Gln Ser Ile Thr Val Ala Val Asn  
420 425 430

Leu Leu Phe Thr Phe Ile Ile Ala Gln Ala Phe Leu Gly Leu Leu Cys  
435 440 445

Ala Phe Lys Phe Gly Ile Phe Leu Phe Phe Ala Gly Trp Val Thr Val  
450 455 460

Met Thr Ile Phe Val Tyr Phe Leu Leu Pro Glu Thr Lys Gly Val Pro  
465 470 475 480

Ile Glu Glu Met Thr Leu Leu Trp Ser Lys His Trp Phe Trp Lys Lys  
485 490 495

Val Leu Pro Asp Ala Thr Asn Leu Glu Asp Glu Ser Lys Asn Val Ser  
500 505 510

Val

&lt;210&gt; 1567

&lt;211&gt; 333

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1567

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atgagctcgt cgccgttatc ttcatctctc tttcatcctc tgtcgacctt gtcgactcat    60
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gccgcaaaac ttcctgaagg ggtgatagtg ccaaagcac aacccaaatc tcaacctgcg    180
tttctgggat tcacacaaac agctgagata tggaactcac gagcttgcac gattgggtctc    240
atcggtactt tcatcgtcga actgattctg aacaagggaa tacttgaact gatcggtgta    300
gagattggga aaggactcga tcttcctcta taa                                333

```

&lt;210&gt; 1568

&lt;211&gt; 110

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1568

```

Met Ser Ser Ser Pro Leu Ser Ser Ser Leu Phe His Pro Leu Ser Thr
 1          5          10
Leu Ser Thr His Cys His Gly Arg Arg Gln Asn Leu Cys Phe Asn Arg
          20          25          30
Lys Gln Gln Pro Phe Val Val Arg Ala Ala Lys Leu Pro Glu Gly Val
          35          40          45
Ile Val Pro Lys Ala Gln Pro Lys Ser Gln Pro Ala Phe Leu Gly Phe
          50          55          60
Thr Gln Thr Ala Glu Ile Trp Asn Ser Arg Ala Cys Met Ile Gly Leu
65          70          75          80
Ile Gly Thr Phe Ile Val Glu Leu Ile Leu Asn Lys Gly Ile Leu Glu
          85          90          95
Leu Ile Gly Val Glu Ile Gly Lys Gly Leu Asp Leu Pro Leu
                                Page 2391

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&lt;210&gt; 1569

&lt;211&gt; 1443

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1569

atggtgaaga ttgctgcat tggagctgga tatgttggtg gtccaacat ggctgtcatt	60
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gcctggaaca gtgatcagtt accgatctat gagcctggtc ttgatgatgt cgttaagcag	180
tgccgtggaa agaattcttt cttcagcacc gatgttgaga aacatgtgag agaggctgac	240
attgtttttg tgtctgtcaa caccctact aagaccgtg gtcttgagc tggcaaagct	300
gcggatttga cttactggga gagcgctgct cgtatgattg ccgatgttcc ggtttccgac	360
aagattgttg ttgagaaatc aactgttcct gtcaaaaccg cagaggcaat tgagaagatt	420
cttacacaca acagcaaagg aatcaaattc cagattctgt caaacctga gttccttgct	480
gaaggaaccg ctattgaaga ccttttcatt cctgaccgtg tcctcatcgg tggctgtgaa	540
acaactgaag gctttgcagc cgtcaaagcc ttgaaagaca tttatgccca atgggtccct	600
gaagagagaa tcctcaccac caatctatgg tctgccgagc tttccaagct tgcagctaat	660
gccttcctag ccagagaagt ctcatcagtc aatgcaatgt ccgctctctg tgaggcaact	720
ggcgccaatg tctcagaggt ctcttatgct gtgggcaag actctcgtat tgggtccaa	780
ttcttgaaat ctagtgttgg gttcggagga tcttgtttcc agaaagatat tctcaactta	840
gtctacatct gcgaatgc aa cggttacc gaagtgtctg agtactggaa acaagtcatt	900
aagatcaacg actaccagaa aaccgattt gttaaccgca ttgtctcttc aatgtttaac	960
acagtctcca acaaaaagat tgcggttctc ggcttcgctt tcaagaaaga cactggagac	1020
actagagaga ctccagccat tgatgtctgc aaaggtctgt taggtgacaa ggctcgtctc	1080
agcatctacg acccacaagt cactgaagag cagatccaaa gagacttaac catgaacaaa	1140
ttcgactggg accaccact tcattctccag cccatgagcc ccaccactgt gaagcaagtc	1200
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&lt;210&gt; 1570

&lt;211&gt; 480

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1570

Met Val Lys Ile Cys Cys Ile Gly Ala Gly Tyr Val Gly Gly Pro Thr  
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Asp Ile Ser Val Pro Arg Ile Asn Ala Trp Asn Ser Asp Gln Leu Pro  
 35 40 45

Ile Tyr Glu Pro Gly Leu Asp Asp Val Val Lys Gln Cys Arg Gly Lys  
 50 55 60

Asn Leu Phe Phe Ser Thr Asp Val Glu Lys His Val Arg Glu Ala Asp  
 65 70 75 80

Ile Val Phe Val Ser Val Asn Thr Pro Thr Lys Thr Arg Gly Leu Gly  
 85 90 95

Ala Gly Lys Ala Ala Asp Leu Thr Tyr Trp Glu Ser Ala Ala Arg Met  
 100 105 110

Ile Ala Asp Val Ser Val Ser Asp Lys Ile Val Val Glu Lys Ser Thr  
 115 120 125

Val Pro Val Lys Thr Ala Glu Ala Ile Glu Lys Ile Leu Thr His Asn  
 130 135 140

Ser Lys Gly Ile Lys Phe Gln Ile Leu Ser Asn Pro Glu Phe Leu Ala  
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Glu Gly Thr Ala Ile Glu Asp Leu Phe Met Pro Asp Arg Val Leu Ile  
 165 170 175

Gly Gly Arg Glu Thr Thr Glu Gly Phe Ala Ala Val Lys Ala Leu Lys  
 180 185 190

Asp Ile Tyr Ala Gln Trp Val Pro Glu Glu Arg Ile Leu Thr Thr Asn  
 Page 2393

195  
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Leu Trp Ser Ala Glu Leu Ser Lys Leu Ala Ala Asn Ala Phe Leu Ala  
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Gln Arg Ile Ser Ser Val Asn Ala Met Ser Ala Leu Cys Glu Ala Thr  
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Gly Ala Asn Val Ser Glu Val Ser Tyr Ala Val Gly Lys Asp Ser Arg  
 245 250 255

Ile Gly Pro Lys Phe Leu Asn Ser Ser Val Gly Phe Gly Gly Ser Cys  
 260 265 270

Phe Gln Lys Asp Ile Leu Asn Leu Val Tyr Ile Cys Glu Cys Asn Gly  
 275 280 285

Leu Pro Glu Val Ala Glu Tyr Trp Lys Gln Val Ile Lys Ile Asn Asp  
 290 295 300

Tyr Gln Lys Thr Arg Phe Val Asn Arg Ile Val Ser Ser Met Phe Asn  
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Thr Val Ser Asn Lys Lys Ile Ala Val Leu Gly Phe Ala Phe Lys Lys  
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Asp Thr Gly Asp Thr Arg Glu Thr Pro Ala Ile Asp Val Cys Lys Gly  
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Leu Leu Gly Asp Lys Ala Arg Leu Ser Ile Tyr Asp Pro Gln Val Thr  
 355 360 365

Glu Glu Gln Ile Gln Arg Asp Leu Thr Met Asn Lys Phe Asp Trp Asp  
 370 375 380

His Pro Leu His Leu Gln Pro Met Ser Pro Thr Thr Val Lys Gln Val  
 385 390 395 400

Ser Val Ala Trp Asp Ala Tyr Thr Ala Thr Lys Asp Ala His Gly Ile  
 405 410 415

Cys Ile Leu Thr Glu Trp Asp Glu Phe Lys Lys Leu Asp Phe Gln Arg  
 420 425 430

Ile Phe Glu Asn Met Gln Lys Pro Ala Phe Val Phe Asp Gly Arg Asn  
 435 440 445



Val Val Asp Ala Asp Lys Leu Arg Glu Ile Gly Phe Ile Val Tyr Ser  
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Ile Gly Lys Pro Leu Asp Gln Trp Leu Lys Asp Met Pro Ala Leu Ala  
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<210> 1571

<211> 1140

<212> DNA

<213> *Arabidopsis thaliana*

<400> 1571

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<210> 1572

<211> 379

<212> PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1572

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35 40 45Glu Arg Cys Asp Tyr Ser Val Gly Lys Trp Thr Phe Asp Glu Thr Tyr  
50 55 60Pro Leu Tyr Asp Ser Ser Cys Pro Tyr Leu Ser Ser Ala Leu Ser Cys  
65 70 75 80Gln Arg Asn Gly Arg Pro Asp Ser Tyr Tyr Gln Lys Trp Arg Trp Ile  
85 90 95Pro Lys Ala Cys Ser Leu Pro Arg Phe Asp Ala Leu Lys Phe Leu Gly  
100 105 110Lys Met Arg Gly Lys Arg Ile Met Leu Val Gly Asp Ser Met Met Arg  
115 120 125Asn Gln Trp Glu Ser Leu Val Cys Leu Val Gln Ser Val Leu Pro Thr  
130 135 140His Arg Lys Lys Leu Thr Tyr Asn Gly Pro Thr Met Ser Phe His Ser  
145 150 155 160Leu Asp Phe Glu Thr Ser Ile Glu Phe Cys Trp Ala Pro Leu Leu Val  
165 170 175Glu Leu Lys Arg Gly Val Asp Arg Lys Arg Val Leu His Leu Asp Ser  
180 185 190Ile Glu Asp Asn Ala Arg Tyr Trp Arg Gly Val Asp Val Leu Val Phe  
195 200 205Asp Ser Ala His Trp Trp Thr His Ser Gln Arg Trp Ser Ser Trp Asp  
210 215 220

Tyr Tyr Met Asp Gly Asn Lys Ile Phe Lys Ala Met Asp Pro Met Val  
 225 230 235 240

Ala Tyr Glu Arg Gly Leu Thr Thr Trp Ala Lys Trp Val Glu Ile Asn  
 245 250 255

Leu Asp Pro Ser Lys Thr Lys Val Ile Phe Arg Thr Val Ser Pro Arg  
 260 265 270

Glu Ser Gly Gln Met Cys Tyr Asn Gln Lys His Pro Leu Pro Ser Leu  
 275 280 285

Ser Ser Ser Thr Lys Pro His Val Pro Gln Gln Ser Arg Val Leu Asn  
 290 295 300

Lys Val Leu Arg Thr Met Lys Tyr Arg Val Tyr Leu Tyr Asp Ile Thr  
 305 310 315 320

Thr Met Ser Ala Tyr Arg Arg Asp Gly His Pro Ser Val Phe Lys Arg  
 325 330 335

Ala Met His Glu Glu Glu Lys His His Arg Ile Ala Gly Pro Ser Ser  
 340 345 350

Asp Cys Ser His Trp Cys Leu Pro Gly Val Pro Asp Ile Trp Asn Glu  
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<210> 1573

<211> 789

<212> DNA

<213> Arabidopsis thaliana

<400> 1573

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<210> 1574

<211> 262

<212> PRT

<213> Arabidopsis thaliana

<400> 1574

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 35 40 45

Glu Lys Ser Glu Ala Glu Lys Thr Gln Arg Leu Lys Thr Ala Tyr Leu  
 50 55 60

Glu Arg Ile Ile Pro Ala Leu Lys Glu Glu Phe Lys Tyr Val Asn Ile  
 65 70 75 80

His Gln Val Pro Lys Val Gln Lys Ile Val Val Asn Cys Gly Ile Gly  
 85 90 95

Asp Ala Ala Gln Asn Asp Lys Gly Leu Glu Ala Ala Met Lys Asp Ile  
 100 105 110

Ala Leu Ile Thr Gly Gln Lys Pro Ile Lys Thr Arg Ala Arg Ala Ser  
 115 120 125

Ile Ala Thr Phe Lys Ile Arg Glu Asp Gln Pro Leu Gly Ile Ala Val  
 130 135 140

Thr Leu Arg Gly Asp Val Met Tyr Ser Phe Leu Asp Arg Leu Ile Asn  
145 150 155 160

Leu Ala Leu Pro Arg Thr Arg Asp Phe Gln Gly Val Ser Pro Ser Ser  
165 170 175

Phe Asp Gly Asn Gly Asn Tyr Ser Ile Gly Val Lys Asp Gln Gly Val  
180 185 190

Phe Pro Glu Ile Arg Phe Asp Ala Val Gly Lys Thr Arg Gly Met Asp  
195 200 205

Val Cys Ile Ser Thr Thr Ala Lys Ser Asp Gln Glu Gly Gln Lys Leu  
210 215 220

Leu Ala Leu Met Gly Met Pro Phe Arg Glu Gly Gly Gly Ser Thr  
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Lys Gly Lys Gly Lys Arg  
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<210> 1575

<211> 1752

<212> DNA

<213> Arabidopsis thaliana

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aacacgaaaa tcaggacacc gaaaactcaa agcccaaaag tagttgtgta tcgccgttct 180  
ccaagaacc ctgtaaatga gattcagaag aaacggacag gaaaaacacc cgaattggca 240  
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agtcagaaat ga 1752

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&lt;210&gt; 1576

&lt;211&gt; 583

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1576

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 Ser Gln Ile Ser Gln Leu Gln Glu Glu Leu Lys Lys Ala Lys Glu Gln  
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 Ser Glu Ala Cys Asn Ser Leu Thr Thr Glu Leu Glu Gln Ser Lys Ser  
 245 250 255  
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Lys Glu Glu Ile Asn Val Ala Arg Gln Glu Ile Ser Gln Leu Lys Ser  
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 Gly Tyr Ala Gln Arg Glu Ala Glu Leu Gly Glu Glu Leu Lys Lys Thr  
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 Lys Glu Lys Glu Glu Val Tyr Leu Asn Leu Glu Asn Ser Leu Asn Gln  
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 405 410 415  
 Met Glu Leu Arg Ala Asn Leu Met Asp Lys Glu Met Glu Leu Gln Ser  
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 Val Met Ser Gln Tyr Glu Ser Leu Arg Ser Glu Met Glu Thr Met Gln  
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 Ser Glu Lys Asn Lys Ala Ile Asp Glu Ala Leu Ala Lys Leu Gly Ser  
 450 455 460  
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 485 490 495  
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 Gly Lys Tyr Val Glu Arg Thr Gly Ser Leu Glu Ser Pro Leu Arg Arg  
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Arg Asn Val Asn Met Ser Pro Tyr Met Gly Glu Thr Asp Asp Glu Leu  
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<210> 1577

<211> 2907

<212> DNA

<213> Arabidopsis thaliana

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&lt;211&gt; 968

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1578

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35 40 45Leu Lys Gln Ser Ala Arg Leu Thr Arg Arg Leu Asp His Arg Pro Phe  
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115 120 125Ile Gly Val Asp Asn Thr Lys Val Leu Glu Ala Thr Glu Lys Phe Ile  
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145 150 155 160Arg Asp Leu Glu Ala Leu Phe Gln Arg Ala Arg Gln Phe Lys Lys Asp  
165 170 175Leu Lys Asp Ser Tyr Val Ser Val Glu His Leu Val Leu Ala Phe Ala  
180 185 190Asp Asp Lys Arg Phe Gly Lys Gln Leu Phe Lys Asp Phe Gln Ile Ser  
195 200 205Glu Arg Ser Leu Lys Ser Ala Ile Glu Ser Ile Arg Gly Lys Gln Ser  
210 215 220 225 230 235 240 245 250

210

215

Val Ile Asp Gln Asp Pro Glu Gly Lys Tyr Glu Ala Leu Glu Lys Tyr  
 225 230 235 240  
 Gly Lys Asp Leu Thr Ala Met Ala Arg Glu Gly Lys Leu Asp Pro Val  
 245 250 255  
 Ile Gly Arg Asp Asp Glu Ile Arg Arg Cys Ile Gln Ile Leu Ser Arg  
 260 265 270  
 Arg Thr Lys Asn Asn Pro Val Leu Ile Gly Glu Pro Gly Val Gly Lys  
 275 280 285  
 Thr Ala Ile Ser Glu Gly Leu Ala Gln Arg Ile Val Gln Gly Asp Val  
 290 295 300  
 Pro Gln Ala Leu Met Asn Arg Lys Leu Ile Ser Leu Asp Met Gly Ala  
 305 310 315 320  
 Leu Ile Ala Gly Ala Lys Tyr Arg Gly Glu Phe Glu Asp Arg Leu Lys  
 325 330 335  
 Ala Val Leu Lys Glu Val Thr Asp Ser Glu Gly Gln Ile Ile Leu Phe  
 340 345 350  
 Ile Asp Glu Ile His Thr Val Val Gly Ala Gly Ala Thr Asn Gly Ala  
 355 360 365  
 Met Asp Ala Gly Asn Leu Leu Lys Pro Met Leu Gly Arg Gly Glu Leu  
 370 375 380  
 Arg Cys Ile Gly Ala Thr Thr Leu Asp Glu Tyr Arg Lys Tyr Ile Glu  
 385 390 395 400  
 Lys Asp Pro Ala Leu Glu Arg Arg Phe Gln Gln Val Tyr Val Asp Gln  
 405 410 415  
 Pro Thr Val Glu Asp Thr Ile Ser Ile Leu Arg Gly Leu Arg Glu Arg  
 420 425 430  
 Tyr Glu Leu His His Gly Val Arg Ile Ser Asp Ser Ala Leu Val Glu  
 435 440 445  
 Ala Ala Ile Leu Ser Asp Arg Tyr Ile Ser Gly Arg Phe Leu Pro Asp  
 450 455 460

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Lys Ala Ile Asp Leu Val Asp Glu Ala Ala Ala Lys Leu Lys Met Glu  
 465 470 475 480  
 Ile Thr Ser Lys Pro Thr Ala Leu Asp Glu Leu Asp Arg Ser Val Ile  
 485 490 495  
 Lys Leu Glu Met Glu Arg Leu Ser Leu Thr Asn Asp Thr Asp Lys Ala  
 500 505 510  
 Ser Arg Glu Arg Leu Asn Arg Ile Glu Thr Glu Leu Val Leu Leu Lys  
 515 520 525  
 Glu Lys Gln Ala Glu Leu Thr Glu Gln Trp Glu His Glu Arg Ser Val  
 530 535 540  
 Met Ser Arg Leu Gln Ser Ile Lys Glu Glu Ile Asp Arg Val Asn Leu  
 545 550 555 560  
 Glu Ile Gln Gln Ala Glu Arg Glu Tyr Asp Leu Asn Arg Ala Ala Glu  
 565 570 575  
 Leu Lys Tyr Gly Ser Leu Asn Ser Leu Gln Arg Gln Leu Asn Glu Ala  
 580 585 590  
 Glu Lys Glu Leu Asn Glu Tyr Leu Ser Ser Gly Lys Ser Met Phe Arg  
 595 600 605  
 Glu Glu Val Leu Gly Ser Asp Ile Ala Glu Ile Val Ser Lys Trp Thr  
 610 615 620  
 Gly Ile Pro Val Ser Lys Leu Gln Gln Ser Glu Arg Asp Lys Leu Leu  
 625 630 635  
 His Leu Glu Glu Glu Leu His Lys Arg Val Val Gly Gln Asn Pro Ala  
 645 650 655  
 Val Thr Ala Val Ala Glu Ala Ile Gln Arg Ser Arg Ala Gly Leu Ser  
 660 665 670  
 Asp Pro Gly Arg Pro Ile Ala Ser Phe Met Phe Met Gly Pro Thr Gly  
 675 680 685  
 Val Gly Lys Thr Glu Leu Ala Lys Ala Leu Ala Ser Tyr Met Phe Asn  
 690 695 700  
 Thr Glu Glu Ala Leu Val Arg Ile Asp Met Ser Glu Tyr Met Glu Lys  
 705 710 715 720

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His Ala Val Ser Arg Leu Ile Gly Ala Pro Pro Gly Tyr Val Gly Tyr  
725 730 735

Glu Glu Gly Gly Gln Leu Thr Glu Thr Val Arg Arg Arg Pro Tyr Ser  
740 745 750

Val Ile Leu Phe Asp Glu Ile Glu Lys Ala His Gly Asp Val Phe Asn  
755 760 765

Val Phe Leu Gln Ile Leu Asp Asp Gly Arg Val Thr Asp Ser Gln Gly  
770 775 780

Arg Thr Val Ser Phe Thr Asn Thr Val Ile Ile Met Thr Ser Asn Val  
785 790 795 800

Gly Ser Gln Phe Ile Leu Asn Asn Thr Asp Asp Asp Ala Asn Glu Leu  
805 810 815

Ser Tyr Glu Thr Ile Lys Glu Arg Val Met Asn Ala Ala Arg Ser Ile  
820 825 830

Phe Arg Pro Glu Phe Met Asn Arg Val Asp Glu Tyr Ile Val Phe Lys  
835 840 845

Pro Leu Asp Arg Glu Gln Ile Asn Arg Ile Val Arg Leu Gln Leu Ala  
850 855 860

Arg Val Gln Lys Arg Ile Ala Asp Arg Lys Met Lys Ile Asn Ile Thr  
865 870 875 880

Asp Ala Ala Val Asp Leu Leu Gly Ser Leu Gly Tyr Asp Pro Asn Tyr  
885 890 895

Gly Ala Arg Pro Val Lys Arg Val Ile Gln Gln Asn Ile Glu Asn Glu  
900 905 910

Leu Ala Lys Gly Ile Leu Arg Gly Asp Phe Lys Glu Glu Asp Gly Ile  
915 920 925

Leu Ile Asp Thr Glu Val Thr Ala Phe Ser Asn Gly Gln Leu Pro Gln  
930 935 940

Gln Lys Leu Thr Phe Lys Lys Ile Glu Ser Glu Thr Ala Asp Ala Glu  
945 950 955 960

Gln Glu Glu Ala Ala Phe Ser Lys  
965

&lt;210&gt; 1579

&lt;211&gt; 1143

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1579

```

atgtctttgc tctctcctct tcctctgctc cactcattct cctccaccgt cgccacaaaa   60
tccaccgcct ctagaatcac tgccacgccg tcgaaaatcc gtttctctgt cataaacgcc   120
acgtcgagaga atggaacacg cggtaggtagt aaaaacgacg gtgatgagga tccatctttt   180
aaccattttg gtttcgttac agacaaccgg tctagccgga gtgcaattca gttaccagag   240
tctccggcgg aagacggcaa tgcgcggcaa atgctctaca ggactgaaga taaaggtaaa   300
gagtattggt caactatcaa atctgggaag cttagatggt ttgtgagaga gactggatca   360
aaggagagtc gtcgaggaaac cattgtattt gttcatggag ctccactca gtccttttagc   420
tacagaactg tcatgtctga gttgtcagat gctggatttc attgctttgc acctgactgg   480
ataggattcg gattcagtga caaaccgcag cctggatacg gttttaatta cacagaaaaa   540
gagtaccatg aggcgtttga taaactgctt gaagtgcctg aggtcaaate tcctttcttt   600
cttgttggtc agggatttct tgtaggttca tatggtttaa cttgggcttt gaaaaatcca   660
agcaagggtg agaaactcgc gatccttaat agtccgctga ccggtttcat cccagtctcc   720
ggattattta agcagctgag gattcccctg tttggtgaat tcacctgcca aaatgctatc   780
ttggccgagc ggttcattga aggaggttag cctacgtcc tgaagaatga gaaagctgat   840
gtgtatcgtc taccatattt gtcaacgcga gggcctggct ttgccttgct cgagactcg   900
aagaagatca actttggaga cacattgagt caaattgcaa atgggttttc atcaggcagc   960
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gcagaggaat ttgagaacaa gaaccccaa aatgttaagc ttcgactcat cgaagggtgt 1080
gggcattttg ctcaagaaga ctggccagag aaagtagttg ctgcctccg agcatttttc 1140
tga                                           1143

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&lt;210&gt; 1580

&lt;211&gt; 380

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1580

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Met Ser Leu Leu Ser Pro Leu Pro Leu Leu His Ser Phe Ser Ser Thr
1      5      10
Val Ala Thr Lys Ser Thr Ala Ser Arg Ile Thr Ala Thr Pro Ser Lys
20     25
Ile Arg Phe Ser Val Ile Asn Ala Thr Ser Glu Asn Gly Asn Ser Gly
35     40     45
Gly Ser Lys Asn Asp Arg Asp Glu Asp Pro Ser Phe Asn Pro Phe Gly
50     55     60
Phe Val Thr Asp Asn Pro Ser Ser Arg Ser Ala Ile Gln Leu Pro Glu
65     70     75
Ser Pro Ala Glu Asp Gly Asn Val Gly Gln Met Leu Tyr Arg Thr Glu
85     90     95
Asp Lys Gly Lys Glu Tyr Gly Ser Thr Ile Lys Ser Gly Lys Leu Arg
100    105    110
Trp Phe Val Arg Glu Thr Gly Ser Lys Glu Ser Arg Arg Gly Thr Ile
115    120    125
Val Phe Val His Gly Ala Pro Thr Gln Ser Phe Ser Tyr Arg Thr Val
130    135    140
Met Ser Glu Leu Ser Asp Ala Gly Phe His Cys Phe Ala Pro Asp Trp
145    150    155    160
Ile Gly Phe Gly Phe Ser Asp Lys Pro Gln Pro Gly Tyr Gly Phe Asn
165    170    175
Tyr Thr Glu Lys Glu Tyr His Glu Ala Phe Asp Lys Leu Leu Glu Val
180    185    190
Leu Glu Val Lys Ser Pro Phe Phe Leu Val Val Gln Gly Phe Leu Val
195    200    205
Gly Ser Tyr Gly Leu Thr Trp Ala Leu Lys Asn Pro Ser Lys Val Glu
210    215    220
Lys Leu Ala Ile Leu Asn Ser Pro Leu Thr Val Ser Ser Pro Val Pro
225    230    235    240

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Gly Leu Phe Lys Gln Leu Arg Ile Pro Leu Phe Gly Glu Phe Thr Cys  
 245 250 255

Gln Asn Ala Ile Leu Ala Glu Arg Phe Ile Glu Gly Gly Ser Pro Tyr  
 260 265 270

Val Leu Lys Asn Glu Lys Ala Asp Val Tyr Arg Leu Pro Tyr Leu Ser  
 275 280 285

Ser Gly Gly Pro Gly Phe Ala Leu Leu Glu Thr Ala Lys Lys Ile Asn  
 290 295 300

Phe Gly Asp Thr Leu Ser Gln Ile Ala Asn Gly Phe Ser Ser Gly Ser  
 305 310 315 320

Trp Asp Lys Pro Thr Leu Leu Ala Trp Gly Ile Ala Asp Lys Tyr Leu  
 325 330 335

Pro Gln Ser Ile Ala Glu Glu Phe Glu Lys Gln Asn Pro Gln Asn Val  
 340 345 350

Lys Leu Arg Leu Ile Glu Gly Ala Gly His Leu Pro Gln Glu Asp Trp  
 355 360 365

Pro Glu Lys Val Val Ala Ala Leu Arg Ala Phe Phe  
 370 375 380

<210> 1581

<211> 1995

<212> DNA

<213> Arabidopsis thaliana

<400> 1581

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ccctttaaaag gtctctctgc cgtctcattt ggtctcttgt tcatcgctt ttacgtcgct	180
ctcatcgcca cacacgacgg atctagatcc aacgacgaag ggatcgatga aacagagacg	240
ataacgtcac gtgcacgtct tgctgggtgt tcggagaac gtaacgatgg gttatggaaa	300
ctttccgggtg atcggaacac gccggcggtt gaatggaaca atagtatgtt gtcgtggcaa	360
cgaacggcgt ttcatattca gctgagcaa aattggatga acgatcctaa cggtcattg	420
ttctacaagg gatggtacca ttcttctac caatataacc caaacgcagc cgtatgggt	480

gacattgttt	gggggtcacgc	cggtgtctagg	gacctaatcc	attgggtcca	tttgcccata	540
gccatggtcg	ctgatcaatg	gtacgactcc	aacggtgtgt	ggaccggctc	agccacattt	600
ctccctgatg	gctctatagt	catgctctat	accggttcca	ccgacaaagc	ggtgcaggtc	660
caaaaccttg	cctaccctga	agaccccaac	gaccacttcc	tgttgaaatg	ggtcaagttc	720
ccggggaacc	cggttctagt	acctccgccc	ggtatcctcc	ctaaggactt	ccgtgaccca	780
acgactgcat	ggaagacatc	agaaggaaaa	tggcggatca	cgattggttc	caagctcaac	840
aaaactggaa	tctcactcgt	gtacgacaca	atcgacttta	aaacatacga	gaaacttgac	900
acattgttgc	accgagtttc	caacactgga	atgtgggagt	gtgttgactt	ttaccgggtg	960
tctaagactg	cgggcaatgg	gcttgacaca	tcggccaatg	gaccggatgt	gaagcatatc	1020
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tcaaacggaa	catggatccc	cgatgatcct	actatcgatg	ttgggatgac	tgccagttta	1140
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atcgaagcag	aattcgagat	taacaaagaa	tctctagaca	aaatcatcgg	aaacgcttcg	1500
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ttcggacaag	gtggaagaac	atgtataaca	tcaagagtct	atccaacaac	tgcaatctat	1860
ggagcagcca	agctcttctt	gttcaataat	gctcttgatg	cgacggttac	ggcgctgttt	1920
acagtttgcc	aaatgaacag	tgctttttatt	catccttact	ctgacgaagc	tgtccgtgct	1980
ctctcccgtg	cctga					1995

&lt;210&gt; 1582

&lt;211&gt; 664

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1582

```

Met Ala Ser Ser Asp Ala Leu Leu Pro Ile Ser Ala Arg Glu Glu Glu
1      5      10      15

Pro Leu Cys Pro Tyr Thr Arg Leu Pro Met Ala Asp Pro Asn Gln Glu
20      25      30

Thr His Gly Pro Arg Arg Arg Arg Pro Phe Lys Gly Leu Leu Ala Val
35      40      45

Ser Phe Gly Leu Leu Phe Ile Ala Phe Tyr Val Ala Leu Ile Ala Thr
50      55      60

His Asp Gly Ser Arg Ser Asn Asp Glu Gly Ile Asp Glu Thr Glu Thr
65      70      75      80

Ile Thr Ser Arg Ala Arg Leu Ala Gly Val Ser Glu Lys Arg Asn Asp
85      90      95

Gly Leu Trp Lys Leu Ser Gly Asp Arg Asn Thr Pro Ala Phe Glu Trp
100     105     110

Asn Asn Ser Met Leu Ser Trp Gln Arg Thr Ala Phe His Phe Gln Pro
115     120     125

Glu Gln Asn Trp Met Asn Asp Pro Asn Gly Pro Leu Phe Tyr Lys Gly
130     135     140

Trp Tyr His Phe Phe Tyr Gln Tyr Asn Pro Asn Ala Ala Val Trp Gly
145     150     155     160

Asp Ile Val Trp Gly His Ala Val Ser Arg Asp Leu Ile His Trp Val
165     170     175

His Leu Pro Ile Ala Met Val Ala Asp Gln Trp Tyr Asp Ser Asn Gly
180     185     190

Val Trp Thr Gly Ser Ala Thr Phe Leu Pro Asp Gly Ser Ile Val Met
195     200     205

Leu Tyr Thr Gly Ser Thr Asp Lys Ala Val Gln Val Gln Asn Leu Ala
210     215     220

Tyr Pro Glu Asp Pro Asn Asp Pro Leu Leu Leu Lys Trp Val Lys Phe
225     230     235     240

Pro Gly Asn Pro Val Leu Val Pro Pro Pro Gly Ile Leu Pro Lys Asp
2413

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Phe Arg Asp Pro Thr Thr Ala Trp Lys Thr Ser Glu Gly Lys Trp Arg  
 260 265 270  
 Ile Thr Ile Gly Ser Lys Leu Asn Lys Thr Gly Ile Ser Leu Val Tyr  
 275 280 285  
 Asp Thr Ile Asp Phe Lys Thr Tyr Glu Lys Leu Asp Thr Leu Leu His  
 290 295 300  
 Arg Val Pro Asn Thr Gly Met Trp Glu Cys Val Asp Phe Tyr Pro Val  
 305 310 315 320  
 Ser Lys Thr Ala Gly Asn Gly Leu Asp Thr Ser Val Asn Gly Pro Asp  
 325 330 335  
 Val Lys His Ile Val Lys Ala Ser Met Asp Asp Thr Arg Phe Asp His  
 340 345 350  
 Tyr Ala Val Gly Thr Tyr Phe Asp Ser Asn Gly Thr Trp Ile Pro Asp  
 355 360 365  
 Asp Pro Thr Ile Asp Val Gly Met Thr Ala Ser Leu Arg Tyr Asp Tyr  
 370 375 380  
 Gly Lys Phe Tyr Ala Ser Lys Ser Phe Tyr Asp Gln Asn Lys Gly Arg  
 385 390 395 400  
 Arg Val Leu Trp Ser Trp Ile Gly Glu Ser Asp Ser Glu Ala Ser Asp  
 405 410 415  
 Val Gln Lys Gly Trp Ser Ser Leu Gln Gly Ile Pro Arg Thr Val Val  
 420 425 430  
 Leu Asp Thr Lys Thr Gly Lys Asn Leu Val Gln Trp Pro Val Glu Glu  
 435 440 445  
 Ile Lys Ser Leu Arg Leu Ser Ser Lys Gln Phe Asp Leu Glu Val Gly  
 450 455 460  
 Pro Gly Ser Val Val Pro Val Asp Val Gly Ser Ala Ala Gln Leu Asp  
 465 470 475 480  
 Ile Glu Ala Glu Phe Glu Ile Asn Lys Glu Ser Leu Asp Lys Ile Ile  
 485 490 495

# 047-E2F-PCT.ST25.txt

Gly Asn Ala Ser Val Val Ala Glu Ala Glu Glu Phe Ser Cys Glu Lys  
500 505 510

Ser Gly Gly Ser Thr Val Arg Gly Ala Leu Gly Pro Phe Gly Phe Ser  
515 520 525

Val Leu Ala Thr Glu Ser Leu Ser Glu Gln Thr Pro Val Tyr Phe Tyr  
530 535 540

Val Ala Lys Gly Lys Asp Ser Glu Leu Lys Thr Phe Phe Cys Thr Asp  
545 550 555 560

Thr Ser Arg Ser Ser Val Ala Asn Asp Val Val Lys Pro Ile Tyr Gly  
565 570 575

Ser Val Val Pro Val Leu Lys Gly Glu Lys Leu Thr Met Arg Ile Leu  
580 585 590

Val Asp His Ser Ile Val Glu Ala Phe Gly Gln Gly Gly Arg Thr Cys  
595 600 605

Ile Thr Ser Arg Val Tyr Pro Thr Thr Ala Ile Tyr Gly Ala Ala Lys  
610 615 620

Leu Phe Leu Phe Asn Asn Ala Leu Asp Ala Thr Val Thr Ala Ser Phe  
625 630 635 640

Thr Val Trp Gln Met Asn Ser Ala Phe Ile His Pro Tyr Ser Asp Glu  
645 650 655

Ala Val Arg Ala Leu Ser Arg Thr  
660

<210> 1583

<211> 1560

<212> DNA

<213> Arabidopsis thaliana

<400> 1583	
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gcgacatgga ctccgacttc gtcatatca cggaggttct tgagtccgat tggtaacacca	180
atgaaacgag ttcttgtgaa catgaaaggg tatcttgag aagttggtca tctcactaag	240

ctaaaccac aagatgcttg gcttccaatc actgaatctc gtaatggaaa cgctcattac 300  
 gctgcttttc acaatctcaa cgctgggtgtt ggttttcaag cccttggtct tcccgctcgcg 360  
 ttgctgttct ttggctggag ttggggaata ctgtctttaa caatagcata ttgctggcaa 420  
 ctctacacac tgtggattct ggttcagttg cacgaagctg tccccgggaa acgctacaat 480  
 cgatagtctg agcttgcaca agctgctttt ggagaaagggt taggagtatg gcttgcattg 540  
 tttcctacgg tttacttacc agcaggaacc gcgacagcgc tgattctgat cgggtggagag 600  
 acaatgaaac tcttcttcca gatagtttgc ggtccattat gcacctgaa tccgttaaca 660  
 acagtgaat ggtatttgggt gtttatctct ctctgcatcg ttctgtctca gctaccaaac 720  
 ctcaattcta ttgcgggact ctcttaata ggagcagtga ctgcaataac ttactccaca 780  
 atggttttgg ttctctctgt gagccaacca agaccagcca ctatctcata cgagcctctt 840  
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 ttgctcttca gaggtcacaa ctggttttgg gaaattcagt cgacgatgcc atcaacgttt 960  
 aagcatcctg ctcacgtacc aatgtggaga ggagccaaaa tctcttactt cctcattgct 1020  
 ctgtgtatct ttccaatctc catcggaggc ttttgggctt atgggaacct tatgccttca 1080  
 ggaggtatgc ttgctgcttt gatgcatc caccattcac atatcccgag aggcttatta 1140  
 gcgacggcat ttctctagt agtcttcagc tgcttgagca gtttctagat atactccatg 1200  
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 gcttatcctt gcttcatgtg ggtcttgatt aagaaaccgg cgaaatacag tttcaattgg 1440  
 tatttccatt ggggattagg ttggttggga gttgcattca gcttggcatt ctccataggt 1500  
 gggatctgga gtatggttac caatggactt aagctcaagt tcttcaagcc gcctaactaa 1560

<210> 1584

<211> 519

<212> PRT

<213> *Arabidopsis thaliana*

<400> 1584

Met Asp Glu Arg Pro Glu Thr Glu Leu Ile Ser Ile Pro Ala Thr Pro  
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Arg Val Ser Thr Pro Glu Ile Leu Thr Pro Ser Gly Gln Arg Ser Pro  
 20 25 30

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Arg Pro Ala Thr Lys Pro Ser Ser Ala Thr Trp Thr Pro Thr Ser Phe  
35 40 45

Ile Ser Pro Arg Phe Leu Ser Pro Ile Gly Thr Pro Met Lys Arg Val  
50 55 60

Leu Val Asn Met Lys Gly Tyr Leu Glu Glu Val Gly His Leu Thr Lys  
65 70 75 80

Leu Asn Pro Gln Asp Ala Trp Leu Pro Ile Thr Glu Ser Arg Asn Gly  
85 90 95

Asn Ala His Tyr Ala Ala Phe His Asn Leu Asn Ala Gly Val Gly Phe  
100 105 110

Gln Ala Leu Val Leu Pro Val Ala Phe Ala Phe Leu Gly Trp Ser Trp  
115 120 125

Gly Ile Leu Ser Leu Thr Ile Ala Tyr Cys Trp Gln Leu Tyr Thr Leu  
130 135 140

Trp Ile Leu Val Gln Leu His Glu Ala Val Pro Gly Lys Arg Tyr Asn  
145 150 155 160

Arg Tyr Val Glu Leu Ala Gln Ala Ala Phe Gly Glu Arg Leu Gly Val  
165 170 175

Trp Leu Ala Leu Phe Pro Thr Val Tyr Leu Ser Ala Gly Thr Ala Thr  
180 185 190

Ala Leu Ile Leu Ile Gly Gly Glu Thr Met Lys Leu Phe Phe Gln Ile  
195 200 205

Val Cys Gly Pro Leu Cys Thr Ser Asn Pro Leu Thr Thr Val Glu Trp  
210 215 220

Tyr Leu Val Phe Thr Ser Leu Cys Ile Val Leu Ser Gln Leu Pro Asn  
225 230 235 240

Leu Asn Ser Ile Ala Gly Leu Ser Leu Ile Gly Ala Val Thr Ala Ile  
245 250 255

Thr Tyr Ser Thr Met Val Trp Val Leu Ser Val Ser Gln Pro Arg Pro  
260 265 270

Ala Thr Ile Ser Tyr Glu Pro Leu Ser Met Pro Ser Thr Ser Gly Ser

275 047-E2F-PCT.ST25.txt  
 280 285  
 Leu Phe Ala Val Leu Asn Ala Leu Gly Ile Ile Ala Phe Ala Phe Arg  
 290 295 300  
 Gly His Asn Leu Val Leu Glu Ile Gln Ser Thr Met Pro Ser Thr Phe  
 305 310 315 320  
 Lys His Pro Ala His Val Pro Met Trp Arg Gly Ala Lys Ile Ser Tyr  
 325 330 335  
 Phe Leu Ile Ala Leu Cys Ile Phe Pro Ile Ser Ile Gly Gly Phe Trp  
 340 345 350  
 Ala Tyr Gly Asn Leu Met Pro Ser Gly Gly Met Leu Ala Ala Leu Tyr  
 355 360 365  
 Ala Phe His Ile His Asp Ile Pro Arg Gly Leu Leu Ala Thr Ala Phe  
 370 375 380  
 Leu Leu Val Val Phe Ser Cys Leu Ser Ser Phe Gln Ile Tyr Ser Met  
 385 390 395 400  
 Pro Ala Phe Asp Ser Phe Glu Ala Gly Tyr Thr Ser Arg Thr Asn Lys  
 405 410 415  
 Pro Cys Ser Ile Trp Val Arg Ser Gly Phe Arg Val Phe Phe Gly Phe  
 420 425 430  
 Val Ser Phe Phe Ile Gly Val Ala Leu Pro Phe Leu Ser Ser Leu Ala  
 435 440 445  
 Gly Leu Leu Gly Gly Leu Thr Leu Pro Val Thr Phe Ala Tyr Pro Cys  
 450 455 460  
 Phe Met Trp Val Leu Ile Lys Lys Pro Ala Lys Tyr Ser Phe Asn Trp  
 465 470 475 480  
 Tyr Phe His Trp Gly Leu Gly Trp Leu Gly Val Ala Phe Ser Leu Ala  
 485 490 495  
 Phe Ser Ile Gly Gly Ile Trp Ser Met Val Thr Asn Gly Leu Lys Leu  
 500 505 510  
 Lys Phe Phe Lys Pro Pro Asn  
 515



&lt;210&gt; 1585

&lt;211&gt; 528

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1585

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aataacaggg ttgaggtagc tccagtgggt ggatggccgc cgggtgagatc atccccggaga      180
aacctaacgg cacaactaaa ggaggagatg aagaagaagg agagtgatga agagaaggaa      240
ttgtacgtta agatcaacat ggaaggagtt ccaataggaa gaaaagtcaa cctttcagct      300
tataaacaact accaacagct ttcacatgcc gttgaccaac tcttctctaa gaaagattcg      360
tgggatctaa acagacaata cactttggtc tacgaagaca ctgaaggaga taaagttctg      420
gtcgggggatg ttccttggga gatgtttgta tctactgtaa agaggttgca tgttttaag      480
acctcccacg ctttctcact ctcacataga aaacatggca aggaatag      528

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&lt;210&gt; 1586

&lt;211&gt; 175

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1586

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Met Glu Glu Glu Lys Arg Leu Glu Leu Arg Leu Ala Pro Pro Cys His
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Gln Phe Thr Ser Asn Asn Asn Ile Asn Gly Ser Lys Gln Lys Ser Ser
 20          25          30
Thr Lys Glu Thr Ser Phe Leu Ser Asn Asn Arg Val Glu Val Ala Pro
 35          40          45
Val Val Gly Trp Pro Pro Val Arg Ser Ser Arg Arg Asn Leu Thr Ala
 50          55          60
Gln Leu Lys Glu Glu Met Lys Lys Lys Glu Ser Asp Glu Glu Lys Glu
 65          70          75          80
Leu Tyr Val Lys Ile Asn Met Glu Gly Val Pro Ile Gly Arg Lys Val

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Asn Leu Ser Ala Tyr Asn Asn Tyr Gln Gln Leu Ser His Ala Val Asp  
 100 105  
 Gln Leu Phe Ser Lys Lys Asp Ser Trp Asp Leu Asn Arg Gln Tyr Thr  
 115 120  
 Leu Val Tyr Glu Asp Thr Glu Gly Asp Lys Val Leu Val Gly Asp Val  
 130 135 140  
 Pro Trp Glu Met Phe Val Ser Thr Val Lys Arg Leu His Val Leu Lys  
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 Thr Ser His Ala Phe Ser Leu Ser Pro Arg Lys His Gly Lys Glu  
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&lt;210&gt; 1587

&lt;211&gt; 2049

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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 gacgtatata gattggttga agacgaagta gatattccca cactggccat gcaagtcgtg 1980  
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<210> 1588

<211> 682

<212> PRT

<213> Arabidopsis thaliana

<400> 1588

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 20 25 30

Ala Leu Leu Arg Ser Leu Asn Ala Val Glu Leu Arg Arg Ser Arg Thr  
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Phe Ser Ala Val Arg Thr Ser Asn Phe Ser Val Thr Ala Ala Ala Thr  
 50 55 60  
 Asp Val Gly Gly Arg Asn Ser Thr Asp Ala Ser Val Met Thr Thr Ala  
 65 70 75 80  
 Met Ser Gly Val Glu Arg Gly Val Arg Val Gly Lys Ser Ser Ser Ala  
 85 90 95  
 Leu Glu Gln Leu Asp Ile Glu Arg Gly Val Cys Val Pro Phe Arg Lys  
 100 105 110  
 Tyr Ser Pro Glu Thr Val Arg Ser Lys Val Leu Glu Ser Arg Gly Ala  
 115 120 125  
 Val Val Ser Leu Val Ser Arg Gly Val Glu Ile Val Trp Thr Leu Gly  
 130 135 140  
 Leu Tyr Trp Ser Thr Leu Thr Tyr Asp Phe Leu Val Gly Arg Asp Glu  
 145 150 155 160  
 Glu Val Val Pro Phe Arg Ala Arg Gln Leu Arg Asn Leu Leu Cys Asn  
 165 170 175  
 Leu Gly Pro Ser Phe Ile Lys Ala Gly Gln Val Leu Ala Asn Arg Pro  
 180 185 190  
 Asp Ile Ile Arg Glu Asp Tyr Met Asn Glu Leu Cys Ile Leu Gln Asp  
 195 200 205  
 Asp Val Pro Pro Phe Pro Asn Glu Val Ala Phe Asn Ile Ile Glu Glu  
 210 215 220  
 Glu Leu Gly Gln Pro Leu Glu Asn Ile Phe Ser Lys Ile Ser Ser Gln  
 225 230 235 240  
 Thr Ile Ala Ala Ala Ser Leu Gly Gln Val Tyr Arg Ala Thr Leu Arg  
 245 250 255  
 Ala Thr Gly Glu Asp Val Ala Ile Lys Val Gln Arg Pro Gln Ile Glu  
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 Pro Ile Ile Tyr Arg Asp Leu Phe Leu Phe Arg Thr Leu Ala Ser Phe  
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Leu Asn Gly Phe Ser Leu Gln Lys Leu Gly Cys Asn Ala Glu Leu Ile  
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 Val Asp Glu Phe Gly Glu Lys Leu Leu Glu Glu Leu Asp Tyr Thr Leu  
 305 310 315 320  
 Glu Ala Arg Asn Ile Glu Asp Phe Leu Glu Asn Phe Lys Asp Asp Pro  
 325 330 335  
 Thr Val Lys Ile Pro Gly Val Tyr Lys Asn Leu Cys Gly Pro Arg Val  
 340 345 350  
 Leu Val Met Glu Trp Ile Asp Gly Ile Arg Cys Thr Asp Pro Gln Ala  
 355 360 365  
 Ile Lys Asp Ala Gly Ile Asp Leu Asn Gly Phe Leu Thr Val Gly Val  
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 385 390 395 400  
 Pro His Pro Gly Asn Ile Phe Ala Met Gln Asp Gly Arg Ile Ala Tyr  
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 Val Asp Phe Gly Asn Val Ala Val Leu Ser Gln Gln Asn Lys Gln Ile  
 420 425 430  
 Leu Ile Asp Ala Val Val His Ala Val Asn Glu Asp Tyr Gly Glu Met  
 435 440 445  
 Ala Asn Asp Phe Thr Arg Leu Gly Phe Leu Ala Lys Asp Thr Asp Val  
 450 455 460  
 Ser Pro Ile Val Pro Ala Leu Glu Ala Ile Trp Gln Asn Ser Ala Gly  
 465 470 475 480  
 Lys Gly Leu Ala Asp Phe Asn Phe Arg Ser Val Thr Gly Gln Phe Asn  
 485 490 495  
 Lys Leu Val Tyr Asp Phe Pro Ile Arg Ile Pro Glu Arg Phe Ser Leu  
 500 505 510  
 Val Ile Arg Ser Leu Leu Thr Gln Glu Gly Ile Cys Phe Thr Leu Lys  
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 530 535 540

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Leu Leu Thr Asp Pro Asn Pro Ala Leu Arg Glu Arg Leu Ile Gln Val  
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Leu Phe Lys Asp Gly Val Phe Gln Trp Lys Arg Leu Glu Asn Leu Leu  
565 570 575

Ser Leu Ala Lys Glu Asn Val Ala Lys Met Ser Ser Asn Pro Asn Leu  
580 585 590

Arg Val Lys Arg Val Glu Ser Lys Leu Asp Leu Thr Asp Thr Ile Lys  
595 600 605

Asp Gly Ala Arg Leu Phe Leu Leu Asp Glu Gly Ile Arg Arg Lys Leu  
610 615 620

Ile Leu Ala Leu Thr Glu Asp Ser Lys Leu His Val Glu Glu Leu Val  
625 630 635 640

Asp Val Tyr Arg Leu Val Glu Asp Glu Val Asp Ile Pro Thr Leu Ala  
645 650 655

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<210> 1589

<211> 954

<212> DNA

<213> Arabidopsis thaliana

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gtgaaagcag gatttgcggt atatggaatt gattacgaag ggcattgaaa atctgatggg 240  
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agcatttgcg agaagaaga gaataaaggg aagatgaggt tctgttagg agaataatg 360  
ggaggagcag tgcttttgtt gttacacaga aagaagcctc agttttggga tggggctgtc 420  
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gagactgttt ttgctgacat cattggctgg ttggataaga aagttgctga tgaaagtgga	900
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<210> 1590

<211> 317

<212> PRT

<213> Arabidopsis thaliana

<400> 1590

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20 25 30

Gln Glu Pro Lys Ala Leu Val Phe Ile Cys His Gly Tyr Ala Met Glu  
35 40 45

Cys Ser Ile Thr Met Asn Ser Thr Ala Arg Arg Leu Val Lys Ala Gly  
50 55 60

Phe Ala Val Tyr Gly Ile Asp Tyr Glu Gly His Gly Lys Ser Asp Gly  
65 70 75 80

Leu Ser Ala Tyr Val Pro Asn Phe Asp His Leu Val Asp Asp Val Ser  
85 90 95

Thr His Tyr Thr Ser Ile Cys Glu Lys Glu Glu Asn Lys Gly Lys Met  
100 105 110

Arg Phe Leu Leu Gly Glu Ser Met Gly Gly Ala Val Leu Leu Leu Leu  
115 120 125

His Arg Lys Lys Pro Gln Phe Trp Asp Gly Ala Val Leu Val Ala Pro  
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130

135

140

Met Cys Lys Ile Ala Glu Glu Met Lys Pro Ser Pro Leu Val Ile Ser  
145 150 155 160

Ile Leu Ala Lys Leu Ser Gly Val Ile Pro Ser Trp Lys Ile Ile Pro  
165 170 175

Gly Gln Asp Ile Ile Glu Thr Ala Phe Lys Gln Pro Glu Ile Arg Lys  
180 185 190

Gln Val Arg Glu Asn Pro Tyr Cys Tyr Lys Gly Arg Pro Arg Leu Lys  
195 200 205

Thr Ala Tyr Glu Leu Leu Arg Val Ser Thr Asp Leu Glu Lys Arg Leu  
210 215 220

Asn Glu Val Ser Leu Pro Phe Ile Val Leu His Gly Glu Asp Asp Lys  
225 230 235 240

Val Thr Asp Lys Ala Val Ser Arg Gln Leu Tyr Glu Val Ala Ser Ser  
245 250 255

Ser Asp Lys Thr Phe Lys Leu Tyr Pro Gly Met Trp His Gly Leu Leu  
260 265 270

Tyr Gly Glu Thr Pro Glu Asn Ile Glu Thr Val Phe Ala Asp Ile Ile  
275 280 285

Gly Trp Leu Asp Lys Lys Val Ala Asp Glu Ser Gly Gly Phe Glu Ser  
290 295 300

Glu Leu Lys Arg Lys Asn Asp Gly Ile Pro Leu Lys Gly  
305 310 315

&lt;210&gt; 1591

&lt;211&gt; 2037

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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aataggatct tagctattat gggtccttca gggtcaggca aatctacgct tcttgatgct 180



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&lt;210&gt; 1592

&lt;211&gt; 678

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1592

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 20 25 30

Gly Val Asn Gly Cys Gly Glu Pro Asn Arg Ile Leu Ala Ile Met Gly  
 35 40 45

Pro Ser Gly Ser Gly Lys Ser Thr Leu Leu Asp Ala Leu Ala Gly Arg  
 50 55 60

Leu Ala Gly Asn Val Val Met Ser Gly Lys Val Leu Val Asn Gly Lys  
 65 70 75 80

Lys Arg Arg Leu Asp Phe Gly Ala Ala Ala Tyr Val Thr Gln Glu Asp  
 85 90 95

Val Leu Leu Gly Thr Leu Thr Val Arg Glu Ser Ile Ser Tyr Ser Ala  
 100 105 110

His Leu Arg Leu Pro Ser Lys Leu Thr Arg Glu Glu Ile Ser Asp Ile  
 115 120 125

Val Glu Ala Thr Ile Thr Asp Met Gly Leu Glu Glu Cys Ser Asp Arg  
 130 135 140

Thr Ile Gly Asn Trp His Leu Arg Gly Ile Ser Gly Gly Glu Lys Lys  
 145 150 155 160

Arg Leu Ser Ile Ala Leu Glu Val Leu Thr Lys Pro Ser Leu Leu Phe  
 165 170 175

Leu Asp Glu Pro Thr Ser Gly Leu Asp Ser Ala Ser Ala Phe Phe Val  
 180 185 190

Val Gln Ile Leu Arg Asn Ile Ala Ser Ser Gly Lys Thr Val Val Ser  
 195 200 205

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Ser Ile His Gln Pro Ser Gly Glu Val Phe Ala Leu Phe Asp Asp Leu  
210 215 220

Leu Leu Leu Ser Gly Gly Glu Thr Val Tyr Phe Gly Glu Ala Glu Ser  
225 230 235 240

Ala Thr Lys Phe Phe Gly Glu Ala Gly Phe Pro Cys Pro Ser Arg Arg  
245 250 255

Asn Pro Ser Asp His Phe Leu Arg Cys Val Asn Ser Asp Phe Asp Asn  
260 265 270

Val Thr Ala Ala Leu Val Glu Ser Arg Arg Ile Asn Asp Ser Ser Phe  
275 280 285

Ser Leu His Gln Leu His Glu Thr Thr Asn Thr Leu Asp Pro Leu Asp  
290 295 300

Asp Ile Pro Thr Ala Glu Ile Arg Thr Thr Leu Val Arg Lys Phe Lys  
305 310 315 320

Cys Ser Leu Tyr Ala Ala Ala Ser Arg Ala Arg Ile Gln Glu Ile Ala  
325 330 335

Ser Ile Val Gly Ile Val Thr Glu Arg Lys Lys Gly Ser Gln Thr Asn  
340 345 350

Trp Trp Lys Gln Leu Arg Ile Leu Thr Gln Arg Ser Phe Ile Asn Met  
355 360 365

Ser Arg Asp Leu Gly Tyr Tyr Trp Met Arg Ile Ala Val Tyr Ile Val  
370 375 380

Leu Ser Ile Cys Val Gly Ser Ile Phe Phe Asn Val Gly Arg Asn His  
385 390 395 400

Thr Asn Val Met Ser Thr Ala Ala Cys Gly Gly Phe Met Ala Gly Phe  
405 410 415

Met Thr Phe Met Ser Ile Gly Gly Phe Gln Ser Phe Ile Glu Glu Met  
420 425 430

Lys Val Phe Ser Arg Glu Arg Leu Asn Gly His Tyr Gly Val Ala Val  
435 440 445

Tyr Thr Val Ser Asn Leu Leu Ser Ser Leu Pro Phe Ile Ile Leu Met  
445 450 455

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450

455

Cys Leu Ser Thr Ser Ser Ile Thr Ile Tyr Met Val Arg Phe Gln Ser  
465 470 475 480

Gly Gly Ser His Phe Phe Tyr Asn Cys Leu Asp Leu Ile Cys Ala Ile  
485 490 495

Thr Thr Val Glu Ser Cys Met Met Met Ile Ala Ser Val Val Pro Asn  
500 505 510

Phe Leu Met Gly Val Met Leu Gly Ala Gly Tyr Ile Gly Ile Met Val  
515 520 525

Leu Ser Ala Gly Phe Phe Arg Phe Phe Pro Asp Leu Pro Met Val Phe  
530 535 540

Trp Arg Tyr Pro Val Ser Tyr Ile Asn Tyr Gly Ala Trp Ala Leu Gln  
545 550 555 560

Gly Ala Tyr Lys Asn Glu Met Ile Gly Val Glu Tyr Asp Ser Pro Leu  
565 570 575

Pro Leu Val Pro Lys Met Lys Gly Glu Leu Ile Leu Gln Thr Val Leu  
580 585 590

Gly Ile Asn Pro Glu Ser Ser Lys Trp Leu Asp Leu Ala Val Val Met  
595 600 605

Met Ile Leu Ile Gly Tyr Arg Ile Ala Phe Phe Ala Ile Leu Lys Phe  
610 615 620

Arg Glu Lys Val Phe Pro Val Ile His Met Leu Tyr Thr Lys Arg Thr  
625 630 635 640

Leu Ser His Ile Gln Lys Arg Pro Ser Phe Arg Arg Met Thr Pro Phe  
645 650 655

Pro Ser Arg Arg Tyr Pro Val His His Ala Leu Ser Ser Gln Glu Gly  
660 665 670

Leu Asn Ser Pro Leu His  
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<210> 1593

<211> 705

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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aacgccgcg gagcaagaat gtcagccacc gcagcatcaa gctacgcgat ggcattagca      180
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gagtttgagt tggtttacaa taagctaacg gatacacaat tggcggaggt taggtcggtg      480
gtgaaattgg aagcgccgca attagctcag attgcgaac aggttcagaa gtaaccgga      540
gctaagaatg ttcgggttaa gacggttatt gatgcgagtc ttgtggctgg ttttacgatt      600
cggtatggtg aatccggttc gaagcttatt gatatgagtg tgaagaaaca gcttgaagat      660
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&lt;210&gt; 1594

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&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

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20          25          30

Pro Ile Arg Ile Asn Asn Gly Gly Asn Ala Ala Gly Ala Arg Met Ser
35          40          45

Ala Thr Ala Ala Ser Ser Tyr Ala Met Ala Leu Ala Asp Val Ala Lys
50          55          60

Arg Asn Asp Thr Met Glu Leu Thr Val Thr Asp Ile Glu Lys Leu Glu
65          70          75          80

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Ser Ser Leu Gln Ser His Thr Ser Asn Phe Leu Asn Val Leu Val Asp  
115 120 125  
Ala Asn Arg Ile Asn Ile Val Thr Glu Ile Val Lys Glu Phe Glu Leu  
130 135 140  
Val Tyr Asn Lys Leu Thr Asp Thr Gln Leu Ala Glu Val Arg Ser Val  
145 150 155 160  
Val Lys Leu Glu Ala Pro Gln Leu Ala Gln Ile Ala Lys Gln Val Gln  
165 170 175  
Lys Leu Thr Gly Ala Lys Asn Val Arg Val Lys Thr Val Ile Asp Ala  
180 185 190  
Ser Leu Val Ala Gly Phe Thr Ile Arg Tyr Gly Glu Ser Gly Ser Lys  
195 200 205  
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<210> 1595

<211> 954

<212> DNA

<213> Arabidopsis thaliana

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047-E2F-PCT.ST25.txt

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<210> 1596

<211> 317

<212> PRT

<213> Arabidopsis thaliana

<400> 1596

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Pro Ile Phe Ser	Ser Thr Gly Asn Ser	Pro Phe Leu Arg	Ala Ser Ser
20	25	30	

Ala Leu Asn Leu	Pro Thr Thr	Ala Ser Lys Pro	Phe His Ser Trp Ile
35	40	45	

Arg Ala Ser Ser	Arg Arg Arg	Leu Val Leu Gly	Gly Phe Gly Gly Ala
50	55	60	

Ser Leu Trp Met	Asn Asn Asn Met	Ser Gly Lys	Phe Gly Gly Lys Ser
65	70	75	80

Phe Ile Ala Ser	Ala Arg Gln Thr	Asn Pro Ser	Pro Val Glu Gln Ala
85	90		95

Leu Asn Lys Val	Asp Trp Pro Glu	Thr Phe Pro Phe Lys	Glu Glu Asp
100	105		110

Phe Gln Arg Tyr	Asp Glu Ser Ser	Asp Ser Thr Phe Tyr	Glu Ala Pro
-----------------	-----------------	---------------------	-------------

115

120

125

Arg Phe Val Thr His Ile Asp Asp Pro Ala Ile Ala Ala Leu Thr Lys  
 130 135 140

Tyr Tyr Ser Lys Val Leu Pro Gln Ser Asp Thr Pro Gly Val Ser Ile  
 145 150 155 160

Leu Asp Met Cys Ser Ser Trp Val Ser His Tyr Pro Pro Gly Tyr Arg  
 165 170 175

Gln Glu Arg Ile Val Gly Met Gly Met Asn Glu Glu Glu Leu Lys Arg  
 180 185 190

Asn Pro Val Leu Thr Glu Tyr Ile Val Gln Asp Leu Asn Leu Asn Ser  
 195 200 205

Asn Leu Pro Phe Glu Asp Asn Ser Phe Gln Val Ile Thr Asn Val Val  
 210 215 220

Ser Val Asp Tyr Leu Thr Lys Pro Leu Glu Val Phe Lys Glu Met Asn  
 225 230 235 240

Arg Ile Leu Lys Pro Gly Gly Leu Ala Leu Met Ser Phe Ser Asn Arg  
 245 250 255

Cys Phe Phe Thr Lys Ala Ile Ser Ile Trp Thr Ser Thr Gly Asp Ala  
 260 265 270

Asp His Ala Leu Ile Val Gly Ser Tyr Phe His Tyr Ala Gly Gly Phe  
 275 280 285

Glu Ala Pro Gln Ala Val Asp Ile Ser Pro Asn Pro Gly Arg Ser Asp  
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Pro Met Tyr Val Val Tyr Ser Arg Lys Leu Pro Met Val  
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<210> 1597

<211> 558

<212> DNA

<213> Arabidopsis thaliana

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 Page 2434



## 047-E2F-PCT.ST25.txt

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&lt;210&gt; 1598

&lt;211&gt; 185

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1598

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Met Gly Leu Ile Pro Gln Pro Gln Glu Ser Ile Gln Glu Ser His Tyr
1      5      10

```

```

Tyr Thr His Lys Leu Phe Leu Thr Ala Asn Tyr Val Leu Leu Gly Ala
20      25      30

```

```

Ser Ser Ser Cys Ile Phe Leu Thr Leu Ser Leu Arg Leu Ile Pro Ser
35      40      45

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```

Leu Cys Gly Phe Phe Leu Ile Leu Leu His Ala Thr Thr Ile Ala Ala
50      55      60

```

```

Ala Val Ser Gly Cys Ala Ala Ala Ser Tyr Gly Lys Asn Arg Trp Tyr
65      70      75      80

```

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Ala Ala His Met Ile Ala Thr Val Leu Thr Ala Ile Phe Gln Gly Ser
85      90      95

```

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Val Ser Val Leu Ile Phe Thr Asn Thr Ser Asn Phe Leu Glu Ser Leu
100      105      110

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Asn Ser Tyr Val Arg Glu Lys Glu Ala Ser Met Ile Leu Lys Leu Ala
115      120      125

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047-E2F-PCT.ST25.txt

Gly Gly Leu Cys Val Val Ile Phe Cys Leu Glu Trp Ile Val Leu Val  
130 135 140

Leu Ala Phe Phe Leu Lys Tyr Tyr Ala Tyr Val Asp Gly Asp Asn Asn  
145 150 155 160

Gly Val Ala Met Lys Arg Thr Gly Lys Val Gln Ser Glu Glu Thr Leu  
165 170 175

Lys Asn Ser Pro Trp Ala Phe Gln Val  
180 185

<210> 1599

<211> 2907

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 1600

&lt;211&gt; 968

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1600

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20 25 30Tyr Asp Ala Leu Leu Leu Asp Arg Phe Leu Asp Ile Leu Gln Asp Leu  
35 40 45His Gly Glu Asp Leu Arg Glu Thr Val Gln Glu Leu Tyr Glu Leu Ser  
50 55 60Ala Glu Tyr Glu Gly Lys Arg Glu Pro Ser Lys Leu Glu Glu Leu Gly  
65 70 75 80Ser Val Leu Thr Ser Leu Asp Pro Gly Asp Ser Ile Val Ile Ser Lys  
85 90 95Ala Phe Ser His Met Leu Asn Leu Ala Asn Leu Ala Glu Glu Val Gln  
100 105 110Ile Ala His Arg Arg Arg Ile Lys Lys Leu Lys Lys Gly Asp Phe Val  
115 120 125Asp Glu Ser Ser Ala Thr Thr Glu Ser Asp Ile Glu Glu Thr Phe Lys  
130 135 140Arg Leu Val Ser Asp Leu Gly Lys Ser Pro Glu Glu Ile Phe Asp Ala  
145 150 155 160Leu Lys Asn Gln Thr Val Asp Leu Val Leu Thr Ala His Pro Thr Gln  
165 170 175Ser Val Arg Arg Ser Leu Leu Gln Lys His Gly Arg Ile Arg Asp Cys  
180 185 190Leu Ala Gln Leu Tyr Ala Lys Asp Ile Thr Pro Asp Asp Lys Gln Glu  
195 200 205

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Leu Asp Glu Ser Leu Gln Arg Glu Ile Gln Ala Ala Phe Arg Thr Asp  
 210 215 220  
 Glu Ile Arg Arg Thr Pro Pro Thr Pro Gln Asp Glu Met Arg Ala Gly  
 225 230 235 240  
 Met Ser Tyr Phe His Glu Thr Ile Trp Lys Gly Val Pro Lys Phe Leu  
 245 250 255  
 Arg Arg Val Asp Thr Ala Leu Lys Asn Ile Gly Ile Asp Glu Arg Val  
 260 265 270  
 Pro Tyr Asn Ala Pro Leu Ile Gln Phe Ser Ser Trp Met Gly Gly Asp  
 275 280 285  
 Arg Asp Gly Asn Pro Arg Val Thr Pro Glu Val Thr Arg Asp Val Cys  
 290 295 300  
 Leu Leu Ala Arg Met Met Ala Ala Asn Leu Tyr Tyr Asn Gln Ile Glu  
 305 310 315 320  
 Asn Leu Met Phe Glu Leu Ser Met Trp Arg Cys Thr Asp Glu Phe Arg  
 325 330 335  
 Val Arg Ala Asp Glu Leu His Arg Asn Ser Arg Lys Asp Ala Ala Lys  
 340 345 350  
 His Tyr Ile Glu Phe Trp Lys Thr Ile Pro Pro Thr Glu Pro Tyr Arg  
 355 360 365  
 Val Ile Leu Gly Asp Val Arg Asp Lys Leu Tyr His Thr Arg Glu Arg  
 370 375 380  
 Ser Arg Gln Leu Leu Ser Asn Gly Ile Ser Asp Ile Pro Glu Glu Ala  
 385 390 395 400  
 Thr Phe Thr Asn Val Glu Gln Phe Leu Glu Pro Leu Glu Leu Cys Tyr  
 405 410 415  
 Arg Ser Leu Cys Ser Cys Gly Asp Ser Pro Ile Ala Asp Gly Ser Leu  
 420 425 430  
 Leu Asp Phe Leu Arg Gln Val Ser Thr Phe Gly Leu Ser Leu Val Arg  
 435 440 445  
 Leu Asp Ile Arg Gln Glu Ser Glu Arg His Thr Asp Val Leu Asp Ala  
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450

455

460

Ile Thr Lys His Leu Asp Ile Gly Ser Ser Tyr Arg Asp Trp Ser Glu  
 465 470 475 480  
 Glu Gly Arg Gln Glu Trp Leu Leu Ala Glu Leu Ser Gly Lys Arg Pro  
 485 490 495  
 Leu Phe Gly Pro Asp Leu Pro Lys Thr Glu Glu Ile Ser Asp Val Leu  
 500 505 510  
 Asp Thr Phe Lys Val Ile Ser Glu Leu Pro Ser Asp Cys Phe Gly Ala  
 515 520 525  
 Tyr Ile Ile Ser Met Ala Thr Ser Pro Ser Asp Val Leu Ala Val Glu  
 530 535 540  
 Leu Leu Gln Arg Glu Cys His Val Lys Asn Pro Leu Arg Val Val Pro  
 545 550 555 560  
 Leu Phe Glu Lys Leu Ala Asp Leu Glu Ala Ala Pro Ala Ala Val Ala  
 565 570 575  
 Arg Leu Phe Ser Ile Asp Trp Tyr Lys Asn Arg Ile Asn Gly Lys Gln  
 580 585 590  
 Glu Val Met Ile Gly Tyr Ser Asp Ser Gly Lys Asp Ala Gly Arg Leu  
 595 600 605  
 Ser Ala Ala Trp Glu Leu Tyr Lys Ala Gln Glu Glu Leu Val Lys Val  
 610 615 620  
 Ala Lys Lys Tyr Gly Val Lys Leu Thr Met Phe His Gly Arg Gly Gly  
 625 630 635 640  
 Thr Val Gly Arg Gly Gly Gly Pro Thr His Leu Ala Ile Leu Ser Gln  
 645 650 655  
 Pro Pro Asp Thr Val Asn Gly Ser Leu Arg Val Thr Val Gln Gly Glu  
 660 665 670  
 Val Ile Glu Gln Ser Phe Gly Glu Ala His Leu Cys Phe Arg Thr Leu  
 675 680 685  
 Gln Arg Phe Thr Ala Ala Thr Leu Glu His Gly Met Asn Pro Pro Ile  
 690 695 700

047-E2F-PCT.ST25.txt

Ser Pro Lys Pro Glu Trp Arg Ala Leu Leu Asp Glu Met Ala Val Val  
705 710 715 720

Ala Thr Glu Glu Tyr Arg Ser Val Val Phe Gln Glu Pro Arg Phe Val  
725 730 735

Glu Tyr Phe Arg Leu Ala Thr Pro Glu Leu Glu Tyr Gly Arg Met Asn  
740 745 750

Ile Gly Ser Arg Pro Ser Lys Arg Lys Pro Ser Gly Gly Ile Glu Ser  
755 760 765

Leu Arg Ala Ile Pro Trp Ile Phe Ala Trp Thr Gln Thr Arg Phe His  
770 775 780

Leu Pro Val Trp Leu Gly Phe Gly Ala Ala Phe Arg Tyr Ala Ile Lys  
785 790 795 800

Lys Asp Val Arg Asn Leu His Met Leu Gln Asp Met Tyr Lys Gln Trp  
805 810 815

Pro Phe Phe Arg Val Thr Ile Asp Leu Ile Glu Met Val Phe Ala Lys  
820 825 830

Gly Asp Pro Gly Ile Ala Ala Leu Tyr Asp Lys Leu Leu Val Ser Glu  
835 840 845

Asp Leu Trp Ala Phe Gly Glu Lys Leu Arg Ala Asn Phe Asp Glu Thr  
850 855 860

Lys Asn Leu Val Leu Gln Thr Ala Gly His Lys Asp Leu Leu Glu Gly  
865 870 875 880

Asp Pro Tyr Leu Lys Gln Arg Leu Arg Leu Arg Asp Ser Tyr Ile Thr  
885 890 895

Thr Leu Asn Val Cys Gln Ala Tyr Thr Leu Lys Arg Ile Arg Asp Ala  
900 905 910

Asn Tyr Asn Val Thr Leu Arg Pro His Ile Ser Lys Glu Ile Met Gln  
915 920 925

Ser Ser Lys Ser Ala Gln Glu Leu Val Lys Leu Asn Pro Thr Ser Glu  
930 935 940

Tyr Ala Pro Gly Leu Glu Asp Thr Leu Ile Leu Thr Met Lys Gly Ile  
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Ala Ala Gly Leu Gln Asn Thr Gly  
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<210> 1601

<211> 468

<212> DNA

<213> Arabidopsis thaliana

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aaaggaacca tcaccgttat ccctaaggat ggtggtagcc ttctgaaatg gtctggtgag      360
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<210> 1602

<211> 155

<212> PRT

<213> Arabidopsis thaliana

<400> 1602

Met Gly Leu Ser Gly Val Leu His Val Glu Val Glu Val Lys Ser Pro  
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Ala Glu Lys Phe Trp Val Ala Leu Gly Asp Gly Ile Asn Leu Phe Pro  
20 25 30

Lys Ala Phe Pro Asn Asp Tyr Lys Thr Ile Gln Val Leu Ala Gly Asp  
35 40 45

Gly Asn Ala Pro Gly Ser Ile Arg Leu Ile Thr Tyr Gly Glu Gly Ser  
50 55 60

Pro Leu Val Lys Ile Ser Ala Glu Arg Ile Glu Ala Val Asp Leu Glu  
65 70 75 80



Asn Lys Ser Met Ser Tyr Ser Ile Ile Gly Gly Glu Met Leu Glu Tyr  
                   85                                  90                                  95

Tyr Lys Thr Phe Lys Gly Thr Ile Thr Val Ile Pro Lys Asp Gly Gly  
                   100                                  105                                  110

Ser Leu Leu Lys Trp Ser Gly Glu Phe Glu Lys Thr Ala His Glu Ile  
                   115                                  120                                  125

Asp Asp Pro His Val Ile Lys Asp Phe Ala Val Lys Asn Phe Lys Glu  
                   130                                  135                                  140

Ile Asp Glu Tyr Leu Leu Lys Gln Thr Ser Ala  
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<211> 1413

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 1604

&lt;211&gt; 470

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1604

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Met Ala Ala Glu Lys Ile Glu Thr Val Val Ala Gly Asn Tyr Leu Glu
1      5      10

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Met Glu Arg Glu Glu Glu Asn Ile Ser Gly Asn Lys Lys Ser Ser Thr
20      25      30

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Lys Thr Lys Leu Ser Asn Phe Phe Trp His Gly Gly Ser Val Tyr Asp
35      40      45

```

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Ala Trp Phe Ser Cys Ala Ser Asn Gln Val Ala Gln Val Leu Leu Thr
50      55      60

```

```

Leu Pro Tyr Ser Phe Ser Gln Leu Gly Met Met Ser Gly Ile Leu Phe
65      70      75      80

```

```

Gln Leu Phe Tyr Gly Leu Met Gly Ser Trp Thr Ala Tyr Leu Ile Ser
85      90      95

```

```

Val Leu Tyr Val Glu Tyr Arg Thr Arg Lys Glu Arg Glu Lys Phe Asp
100     105     110

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```

Phe Arg Asn His Val Ile Gln Trp Phe Glu Val Leu Asp Gly Leu Leu
115     120     125

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047-E2F-PCT.ST25.txt

Gly Lys His Trp Arg Asn Leu Gly Leu Ile Phe Asn Cys Thr Phe Leu  
130 135 140

Leu Phe Gly Ser Val Ile Gln Leu Ile Ala Cys Ala Ser Asn Ile Tyr  
145 150 155 160

Tyr Ile Asn Asp Lys Leu Asp Lys Arg Thr Trp Thr Tyr Ile Phe Gly  
165 170 175

Ala Cys Cys Ala Thr Thr Val Phe Ile Pro Ser Phe His Asn Tyr Arg  
180 185 190

Ile Trp Ser Phe Leu Gly Leu Ala Met Thr Thr Tyr Thr Ser Trp Tyr  
195 200 205

Leu Thr Ile Ala Ser Leu Leu His Gly Gln Ala Glu Asp Val Lys His  
210 215 220

Ser Gly Pro Thr Thr Met Val Leu Tyr Phe Thr Gly Ala Thr Asn Ile  
225 230 235 240

Leu Tyr Thr Phe Gly Gly His Ala Val Thr Val Glu Ile Met His Ala  
245 250 255

Met Trp Lys Pro Gln Lys Phe Lys Ala Ile Tyr Leu Leu Ala Thr Ile  
260 265 270

Tyr Val Leu Thr Leu Thr Leu Pro Ser Ala Ser Ala Val Tyr Trp Ala  
275 280 285

Phe Gly Asp Lys Leu Leu Thr His Ser Asn Ala Leu Ser Leu Leu Pro  
290 295 300

Lys Thr Gly Phe Arg Asp Thr Ala Val Ile Leu Met Leu Ile His Gln  
305 310 315 320

Phe Ile Thr Phe Gly Phe Ala Ser Thr Pro Leu Tyr Phe Val Trp Glu  
325 330 335

Lys Leu Ile Gly Val His Glu Thr Lys Ser Met Phe Lys Arg Ala Met  
340 345 350

Ala Arg Leu Pro Val Val Val Pro Ile Trp Phe Leu Ala Ile Ile Phe  
355 360 365

Pro Phe Phe Gly Pro Ile Asn Ser Ala Val Gly Ser Leu Leu Val Ser  
370 375 380

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Phe Thr Val Tyr Ile Ile Pro Ala Leu Ala His Met Leu Thr Phe Ala  
385 390 395 400

Pro Ala Pro Ser Arg Glu Asn Ala Val Glu Arg Pro Pro Arg Val Val  
405 410 415

Gly Gly Trp Met Gly Thr Tyr Cys Ile Asn Ile Phe Val Val Val Trp  
420 425 430

Val Phe Val Val Gly Phe Gly Phe Gly Gly Trp Ala Ser Met Val Asn  
435 440 445

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Cys Pro Pro His Lys Pro  
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<211> 546

<212> DNA

<213> Arabidopsis thaliana

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<210> 1606

<211> 181

<212> PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1606

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          20           25           30

Phe Tyr Leu Arg Thr Gly Ser Ile Trp Lys Ala Gly Thr Asp Ser Ile
      35           40           45

Ile Ser Ala Arg Ile Tyr Asp Lys Asp Gly Asp Tyr Ile Gly Ile Lys
      50           55           60

Asn Leu Gln Ala Trp Ala Gly Leu Met Gly Pro Asp Tyr Asn Tyr Phe
65           70           75           80

Glu Arg Gly Asn Leu Asp Ile Phe Ser Gly Arg Ala Pro Cys Leu Pro
          85           90           95

Ser Pro Ile Cys Ala Leu Asn Leu Thr Ser Asp Gly Ser Gly Asp His
          100          105          110

His Gly Trp Tyr Val Asn Tyr Val Glu Ile Thr Thr Ala Gly Val His
      115          120          125

Ala Gln Cys Ser Thr Gln Asp Phe Glu Ile Glu Gln Trp Leu Ala Thr
      130          135          140

Asp Thr Ser Pro Tyr Glu Leu Thr Ala Val Arg Asn Asn Cys Pro Val
145          150          155          160

Lys Leu Arg Asp Ser Val Ser Arg Val Gly Ser Glu Ile Arg Lys Lys
          165          170          175

Leu Ser Trp Val Val
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&lt;210&gt; 1607

&lt;211&gt; 708

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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 gatgatagtt gcttgacatc ttctgagaat tggggaggtt tcaattctga ttctctctta 660  
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<210> 1608

<211> 235

<212> PRT

<213> *Arabidopsis thaliana*

<400> 1608

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Gly Met Thr Met Asn Lys Lys Lys Met Lys Lys Ser Asn Asn Gln Lys  
 20 25 30

Arg Phe Ser Glu Glu Gln Ile Lys Ser Leu Glu Leu Ile Phe Glu Ser  
 35 40 45

Glu Thr Arg Leu Glu Pro Arg Lys Lys Val Gln Val Ala Arg Glu Leu  
 50 55 60

Gly Leu Gln Pro Arg Gln Val Ala Ile Trp Phe Gln Asn Lys Arg Ala  
 65 70 75 80

Arg Trp Lys Thr Lys Gln Leu Glu Lys Glu Tyr Asn Thr Leu Arg Ala  
 85 90 95

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Asn Tyr Asn Asn<sub>100</sub> Leu Ala Ser Gln Phe<sub>105</sub> Glu Ile Met Lys Lys<sub>110</sub> Glu Lys

Gln Ser Leu Val<sub>115</sub> Ser Glu Leu Gln<sub>120</sub> Arg Leu Asn Glu Glu<sub>125</sub> Met Gln Arg

Pro Lys Glu Glu Lys His His<sub>135</sub> Glu Cys Cys Gly Asp<sub>140</sub> Gln Gly Leu Ala

Leu Ser Ser Ser Thr Glu<sub>150</sub> Ser His Asn Gly Lys<sub>155</sub> Ser Glu Pro Glu Gly<sub>160</sub>

Arg Leu Asp Gln Gly<sub>165</sub> Ser Val Leu Cys Asn<sub>170</sub> Asp Gly Asp Tyr Asn<sub>175</sub> Asn

Asn Ile Lys Thr<sub>180</sub> Glu Tyr Phe Gly Phe<sub>185</sub> Glu Glu Glu Thr Asp<sub>190</sub> His Glu

Leu Met Asn<sub>195</sub> Ile Val Glu Lys Ala<sub>200</sub> Asp Asp Ser Cys Leu<sub>205</sub> Thr Ser Ser

Glu Asn Trp Gly Gly Phe Asn<sub>215</sub> Ser Asp Ser Leu Leu<sub>220</sub> Asp Gln Ser Ser

Ser Asn Tyr Pro Asn Trp<sub>230</sub> Trp Glu Phe Trp Ser<sub>235</sub>

<210> 1609

<211> 660

<212> DNA

<213> Arabidopsis thaliana

<400> 1609

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gagatcccaa tcgaactaag gtatgaggcg ttcccgacag tgatggacat caataagata	240
caagagattt tgccctcacag attcccatTT ctgttagttg atagagtgat agagtacaca	300
gctggtgtat ctgcggtagc tattaaaaac gttaccatta atgacaattt ctttcctggg	360
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ggaggtatag tgatgtcata accagaagtt ggcggatcta gaagcaact cttctttgct	480

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<210> 1610

<211> 219

<212> PRT

<213> Arabidopsis thaliana

<400> 1610

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 20 25 30

Ser Ser Val Ala Phe Arg Pro Lys Arg Arg Ser Ser Ser Leu Val Leu  
 35 40 45

Cys Ser Thr Asp Glu Ser Lys Ser Thr Ala Glu Lys Glu Ile Pro Ile  
 50 55 60

Glu Leu Arg Tyr Glu Ala Phe Pro Thr Val Met Asp Ile Asn Lys Ile  
 65 70 75 80

Gln Glu Ile Leu Pro His Arg Phe Pro Phe Leu Leu Val Asp Arg Val  
 85 90 95

Ile Glu Tyr Thr Ala Gly Val Ser Ala Val Ala Ile Lys Asn Val Thr  
 100 105 110

Ile Asn Asp Asn Phe Phe Pro Gly His Phe Pro Glu Arg Pro Ile Met  
 115 120 125

Pro Gly Val Leu Met Val Glu Ala Met Ala Gln Val Gly Gly Ile Val  
 130 135 140

Met Leu Gln Pro Glu Val Gly Gly Ser Arg Ser Asn Phe Phe Phe Ala  
 145 150 155 160

Gly Ile Asp Lys Val Arg Phe Arg Lys Pro Val Ile Ala Gly Asp Thr  
 165 170 175



Leu Val Met Arg Met Thr Leu Val Lys Leu Gln Lys Arg Phe Gly Ile  
 180 185 190

Ala Lys Met Glu Gly Lys Ala Tyr Val Gly Asn Ser Val Val Cys Glu  
 195 200 205

Gly Glu Phe Leu Met Ala Met Gly Lys Glu Glu  
 210 215

<210> 1611

<211> 651

<212> DNA

<213> Arabidopsis thaliana

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 agcaaagggt gcagctttta ccggttagag gtgattgatg ggaagagaca gatcgtatat 540  
 ggaagagact gcgttgagcc tgcaatcaaa cctggagaaa cagttctggc tgctataaag 600  
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<210> 1612

<211> 216

<212> PRT

<213> Arabidopsis thaliana

<400> 1612

Met Ser Phe Thr Ala Ser Leu Val Ser Tyr Leu Thr Ser Pro Ser Leu  
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Val Ser Leu Asn His Leu Pro Pro Ser Phe Phe Leu Pro Thr Lys Leu  
 Page 2451

Val Lys Pro Thr Ser Leu Thr His Ser Gln Pro Pro Arg Leu Ser Ala  
35 40 45

Ser Tyr Gly Pro Ala Ala Lys Ala Ala Thr Ala Asn Asp Val Val Pro  
50 55 60

Glu Thr Ala Pro Thr Ser Ala Ser Glu Val Val Ser Ser Phe Tyr Ala  
65 70 75 80

Ala Val Asn Val His Asp Leu Ser Ser Val Thr Asp Leu Ile Ala Gln  
85 90 95

Asp Cys Val Tyr Glu Asp Leu Val Phe Ser Ser Pro Phe Val Gly Arg  
100 105 110

Lys Ala Ile Leu Asp Phe Phe Gly Lys Phe Ile Glu Ser Thr Ser Thr  
115 120 125

Asp Leu Gln Phe Val Ile Asp Asp Ile Ser Thr Glu Asp Ser Ser Ala  
130 135 140

Val Gly Val Ser Trp His Leu Glu Trp Lys Gly Lys Asn Phe Pro Phe  
145 150 155 160

Ser Lys Gly Cys Ser Phe Tyr Arg Leu Glu Val Ile Asp Gly Lys Arg  
165 170 175

Gln Ile Val Tyr Gly Arg Asp Cys Val Glu Pro Ala Ile Lys Pro Gly  
180 185 190

Glu Thr Val Leu Ala Ala Ile Lys Gly Val Thr Trp Leu Leu Gln Lys  
195 200 205

Phe Pro Gln Leu Ala Asp Gln Phe  
210 215

<210> 1613

<211> 1389

<212> DNA

<213> Arabidopsis thaliana

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Page 2452

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<210> 1614

<211> 462

<212> PRT

<213> *Arabidopsis thaliana*

<400> 1614

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Arg Phe Phe Ser Ser Asp Asp Gly Ile Gly Arg Leu Gly Ile Thr Arg  
20 25 30

Lys Arg Ile Asn Gly Thr Phe Leu Leu Lys Ile Leu Pro Ile Gln  
35 40 45

Ser Ala Asp Leu Arg Thr Thr Gly Gly Arg Ser Ser Arg Pro Leu Ser  
50 55 60

Ala Phe Arg Ser Gly Phe Ser Lys Gly Ile Phe Asp Ile Val Pro Leu  
65 70 75 80

Pro Ser Lys Asn Glu Leu Lys Glu Leu Thr Ala Pro Leu Leu Leu Lys  
85 90 95

Leu Val Gly Val Leu Ala Cys Ala Phe Leu Ile Val Pro Ser Ala Asp  
100 105 110

Ala Val Asp Ala Leu Lys Thr Cys Ala Cys Leu Leu Lys Gly Cys Arg  
115 120 125

Ile Glu Leu Ala Lys Cys Ile Ala Asn Pro Ala Cys Ala Ala Asn Val  
130 135 140

Ala Cys Leu Gln Thr Cys Asn Asn Arg Pro Asp Glu Thr Glu Cys Gln  
145 150 155 160

Ile Lys Cys Gly Asp Leu Phe Glu Asn Ser Val Val Asp Glu Phe Asn  
165 170 175

Glu Cys Ala Val Ser Arg Lys Lys Cys Val Pro Arg Lys Ser Asp Leu  
180 185 190

Gly Glu Phe Pro Ala Pro Asp Pro Ser Val Leu Val Gln Asn Phe Asn  
195 200 205

Ile Ser Asp Phe Asn Gly Lys Trp Tyr Ile Thr Ser Gly Leu Asn Pro  
210 215 220

Thr Phe Asp Ala Phe Asp Cys Gln Leu His Glu Phe His Thr Glu Gly  
225 230 235 240

Asp Asn Lys Leu Val Gly Asn Ile Ser Trp Arg Ile Lys Thr Leu Asp  
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Ser Gly Phe Phe Thr Arg Ser Ala Val Gln Lys Phe Val Gln Asp Pro  
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Asn Gln Pro Gly Val Leu Tyr Asn His Asp Asn Glu Tyr Leu His Tyr  
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Gln Asp Asp Trp Tyr Ile Leu Ser Ser Lys Ile Glu Asn Lys Pro Glu  
290 295 300

Asp Tyr Ile Phe Val Tyr Tyr Arg Gly Arg Asn Asp Ala Trp Asp Gly  
305 310 315 320

Tyr Gly Gly Ala Val Val Tyr Thr Arg Ser Ser Val Leu Pro Asn Ser  
325 330 335

Ile Ile Pro Glu Leu Glu Lys Ala Ala Lys Ser Ile Gly Arg Asp Phe  
340 345 350

Ser Thr Phe Ile Arg Thr Asp Asn Thr Cys Gly Pro Glu Pro Ala Leu  
355 360 365

Val Glu Arg Ile Glu Lys Thr Val Glu Glu Gly Glu Arg Ile Ile Val  
370 375 380

Lys Glu Val Glu Glu Ile Glu Glu Glu Val Glu Lys Glu Val Glu Lys  
385 390 395 400

Val Gly Arg Thr Glu Met Thr Leu Phe Gln Arg Leu Ala Glu Gly Phe  
405 410 415

Asn Glu Leu Lys Gln Asp Glu Glu Asn Phe Val Arg Glu Leu Ser Lys  
420 425 430

Glu Glu Met Glu Phe Leu Asp Glu Ile Lys Met Glu Ala Ser Glu Val  
435 440 445

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450 455 460

<210> 1615

<211> 1164

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 1616

&lt;211&gt; 387

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1616

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Ala Val Cys Ser Lys Phe Val Leu Pro Lys Ser Pro Phe Met Ser Gly
20           25           30

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Ser Lys Leu Phe Ser Ser Asn Met Pro Cys Ser Thr Val Pro Arg Arg
35           40           45

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Thr Arg Arg Ser His Cys Phe Ala Ser Ala Lys Asp Met Ser Phe Asp  
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 65 70 75  
 Gln Asn Phe Lys Asn Val Pro Gln Tyr Phe Tyr Gly Leu Asn Ser Ala  
 85 90 95  
 Gln Met Asp Met Phe Met Thr Glu Asp Ser Pro Val Arg Arg Gln Ala  
 100 105 110  
 Glu Lys Val Thr Glu Glu Ser Ile Ser Ser Arg Asn Asn Tyr Leu Asn  
 115 120 125  
 Asn Gly Gly Ile Trp Ser Met Ser Gly Met Asn Ala Ala Asp Ala Arg  
 130 135 140  
 Arg Tyr Ser Met Ser Val Gln Met Tyr Arg Gly Gly Gly Gly Gly  
 145 150 155 160  
 Gly Ser Glu Arg Pro Arg Thr Ala Pro Pro Asp Leu Pro Ser Leu Leu  
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 Leu Asp Ala Arg Ile Cys Tyr Leu Gly Met Pro Ile Val Pro Ala Val  
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 Thr Glu Leu Leu Val Ala Gln Phe Met Trp Leu Asp Tyr Asp Asn Pro  
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 Thr Lys Pro Ile Tyr Leu Tyr Ile Asn Ser Pro Gly Thr Gln Asn Glu  
 210 215 220  
 Lys Met Glu Thr Val Gly Ser Glu Thr Glu Ala Tyr Ala Ile Ala Asp  
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 275 280 285  
 Asn Arg Ser Ser Gly Ala Ala Ile Asp Met Trp Ile Lys Ala Lys Glu  
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Leu Asp Ala Asn Thr Glu Tyr Tyr Ile Glu Leu Leu Ala Lys Gly Thr  
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325 330 335

Leu Gln Ala Gln Ala Ala Ile Asp Tyr Gly Ile Ala Asp Lys Ile Ala  
340 345 350

Asp Ser Gln Asp Ser Ser Phe Glu Lys Arg Asp Tyr Asp Gly Thr Leu  
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370 375 380

Gly Leu Arg  
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<211> 993

<212> DNA

<213> Arabidopsis thaliana

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<211> 330

<212> PRT

<213> *Arabidopsis thaliana*

<400> 1618

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20 25 30

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35 40 45

Ala Leu Arg Val Asn Val Leu Arg Leu Ala Cys Asp Asn Arg Leu Arg  
50 55 60

Cys Asn Gly His Gly Ala Thr Met Asn Leu Phe Glu Arg Phe Ser Arg  
65 70 75 80

Val Val Lys Ser Tyr Ala Asn Ala Leu Ile Ser Ser Phe Glu Asp Pro  
85 90 95

Glu Lys Ile Leu Glu Gln Thr Val Ile Glu Met Asn Ser Asp Leu Thr  
100 105 110

Lys Met Arg Gln Ala Thr Ala Gln Val Leu Ala Ser Gln Lys Gln Leu  
115 120 125

Gln Asn Lys Tyr Lys Ala Ala Gln Gln Ser Ser Asp Asp Trp Tyr Lys  
130 135 140

Arg Ala Gln Leu Ala Leu Ala Lys Gly Asp Glu Asp Leu Ala Arg Glu  
145 150 155 160

Ala Leu Lys Arg Arg Lys Ser Phe Ala Asp Asn Ala Thr Ala Leu Lys  
165 170 175

047-E2F-PCT.ST25.txt

Thr Gln Leu Asp Gln Gln Lys Gly Val Val Asp Asn Leu Val Ser Asn  
180 185 190

Thr Arg Leu Leu Glu Ser Lys Ile Gln Glu Ala Lys Ala Lys Lys Asp  
195 200 205

Thr Leu Leu Ala Arg Ala Arg Thr Ala Lys Thr Ala Thr Lys Val Gln  
210 215 220

Glu Met Ile Gly Thr Val Asn Thr Ser Gly Ala Leu Ser Ala Phe Glu  
225 230 235 240

Lys Met Glu Glu Lys Val Met Ala Met Glu Ser Glu Ala Asp Ala Leu  
245 250 255

Thr Gln Ile Gly Thr Asp Glu Leu Glu Gly Lys Phe Gln Met Leu Glu  
260 265 270

Thr Ser Ser Val Asp Asp Asp Leu Ala Asp Leu Lys Lys Glu Leu Ser  
275 280 285

Gly Ser Ser Lys Lys Gly Glu Leu Pro Pro Gly Arg Ser Thr Val Ala  
290 295 300

Ala Ser Thr Arg Tyr Pro Phe Lys Asp Ser Glu Ile Glu Asn Glu Leu  
305 310 315 320

Asn Glu Leu Arg Arg Lys Ala Asn Asp Phe  
325 330

<210> 1619

<211> 261

<212> DNA

<213> Arabidopsis thaliana

<400> 1619  
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cgagcgaga aaaaaatggt gatgaagaag aaggtgagat tcgcggcgga tgtggtggag 180  
ccgtcgggga ataacaaga gtatcgccgg agacattctt ccaaggctaa atcgaattcg 240  
aagatggcgg caactatttg a 261

&lt;210&gt; 1620

&lt;211&gt; 86

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1620

Met Glu Ser Ser Leu Gly Phe Met Ala Val Phe Ala Val Ser Gly Ser  
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20 25 30Met Asp Lys Phe Glu Phe Glu Ile Arg Ala Gln Lys Lys Met Val Met  
35 40 45Lys Lys Lys Val Arg Phe Ala Ala Asp Val Val Glu Pro Ser Gly Asn  
50 55 60Asn Lys Glu Tyr Arg Arg Arg His Ser Ser Lys Ala Lys Ser Asn Ser  
65 70 75 80Lys Met Ala Ala Thr Ile  
85

&lt;210&gt; 1621

&lt;211&gt; 1056

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1621

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tcttacagtc tcacgtcgaa tcttggagtg acgacaagag agtgagaga cgagcgacca	180
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aatccgaaag gcggtataaa taatcatatt tcactttacg cgaggataga agagacagaa	360
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 cttgtgcagg acacagcttc ttttgggtgct gagatcttca tcgttaaccc gacagaaaaa 600  
 caagagaaag tcacattcat atcaaaccct ccagacaatg ttttctactg gaagatactt 660  
 cgtttctcta ccttgggaaga taaattctat tactctgatg attttcttgt tggagaccga 720  
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 gttaatctgc ggttaaagaa tcaacgaagc tccaaccaca aacaattata ttctgcagct 900  
 tggtagccga ttcgaagcga ttatggtgtg ggagtgaaca atataatatt gatgtcagag 960  
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<210> 1622

<211> 351

<212> PRT

<213> Arabidopsis thaliana

<400> 1622

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Phe Ile Thr Ser Ser Ser Ala Glu Leu Ile Ile Lys Gln Val Thr Gln  
 20 25 30

Gly Arg Gly Ile Glu Tyr Asn Asn Ser Tyr Ser Leu Thr Ser Asn Leu  
 35 40 45

Gly Val Thr Thr Arg Glu Leu Arg Asp Glu Arg Pro Ser Ser Lys Ile  
 50 55 60

Val Thr Ile Thr Ser Phe Ser Val Ile Lys Asp Arg Gly Glu Pro Tyr  
 65 70 75 80

Glu Ser Ser Ile Phe Glu Ala Ala Gly Tyr Lys Trp Arg Leu Val Leu  
 85 90 95

Tyr Val Lys Gly Asn Pro Lys Gly Gly Ile Asn Asn His Ile Ser Leu  
 100 105 110

Tyr Ala Arg Ile Glu Glu Thr Glu Thr Leu Pro Arg Gly Trp Glu Val  
 115 120 125

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Asn Val Asp Leu Lys Leu Phe Val His Asn Arg Lys Leu Lys Lys Tyr  
 130 135 140  
 Leu Ser Val Thr Asp Gly Thr Val Lys Arg Tyr Asn Asp Ala Lys Lys  
 145 150 155 160  
 Glu Trp Gly Phe Thr Gln Leu Ile Ser Leu Pro Thr Phe Tyr Asn Ala  
 165 170 175  
 Asn Glu Gly Tyr Leu Val Gln Asp Thr Ala Ser Phe Gly Ala Glu Ile  
 180 185 190  
 Phe Ile Val Asn Pro Thr Glu Lys Gln Glu Lys Val Thr Phe Ile Ser  
 195 200 205  
 Asn Pro Pro Asp Asn Val Phe Thr Trp Lys Ile Leu Arg Phe Ser Thr  
 210 215 220  
 Leu Glu Asp Lys Phe Tyr Tyr Ser Asp Asp Phe Leu Val Gly Asp Arg  
 225 230 235 240  
 Tyr Trp Arg Leu Gly Phe Asn Pro Lys Gly Ser Gly Gly Gly Arg Pro  
 245 250 255  
 His Ala Leu Pro Ile Phe Leu Tyr Ala Gln Gly His Lys Ala Asn Ala  
 260 265 270  
 Val Val Thr Asn Thr Trp Gly Ala Val Asn Leu Arg Leu Lys Asn Gln  
 275 280 285  
 Arg Ser Ser Asn His Lys Gln Leu Tyr Ser Ala Ala Trp Tyr Pro Ile  
 290 295 300  
 Arg Ser Asp Tyr Gly Val Gly Val Asn Asn Ile Ile Leu Met Ser Glu  
 305 310 315 320  
 Leu Lys Asp Ala Ser Lys Gly Tyr Met Val Asn Asp Ala Ile Ile Phe  
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 Glu Ala Glu Met Val Lys Val Ser Val Thr Asn Ile Val Ser Val  
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<210> 1623

<211> 651

<212> DNA

<213> *Arabidopsis thaliana*

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 cctattgaag tagagggact ttacagagtt gacaaccgct ttaatcaaga cagcaatacg 240  
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 caacttacca ctttcactga tctcacgggc tgggcatttg gctcatccgt gatagtggaa 600  
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&lt;210&gt; 1624

&lt;211&gt; 216

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

<400> 1624  
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 Thr Gln Arg Trp Leu Asn Ala Ala Glu Trp Ser Ile Leu Tyr Asn Asn  
 35 40 45  
 His Asn Leu Phe Pro Glu Ser Asn Ser Phe Thr Ile Pro Ile Glu Val  
 50 55 60  
 Glu Gly Leu Tyr Arg Val Asp Asn Arg Phe Asn Gln Asp Ser Asn Thr  
 65 70 75 80  
 Trp Arg Asn Thr Ser Ala Pro Ser Thr Cys Lys Asn Ala Ile Asn Phe  
 85 90 95

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Tyr Asn Val Arg Ile Ala Thr Gly Leu Tyr Arg Phe Asp Asp Asp Gly  
100 105 110

Asp Ile Val Met Asp Ala Glu Val Gln Gly Gly Trp Val Leu Cys Arg  
115 120 125

Lys Thr Val Arg Asn Arg Gly His Cys Gly Thr Arg Leu Ser His Leu  
130 135 140

Tyr Lys Pro Val Phe Asp Arg Gln Phe Lys Met Leu Lys Ile His Met  
145 150 155 160

Met Glu Asp Met Ile Lys Asp Gly Glu Glu Lys Ser Leu Asp Thr Phe  
165 170 175

Val Ile Ser Arg Gln Leu Thr Thr Phe Thr Asp Leu Thr Gly Trp Ala  
180 185 190

Phe Gly Ser Ser Val Ile Val Glu Phe Lys Val Arg Leu Glu His Leu  
195 200 205

Arg Gly Lys Ser Ile Pro Ile Ala  
210 215

<210> 1625

<211> 1206

<212> DNA

<213> Arabidopsis thaliana

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gattaccttg tcggagctgt ggcaaacccc aagaagcctt ttgctgcat tgttgaggc 600  
 tcaaaaggtt caacaaagat tgggtgcatt gactctctt tgaacacagt tgacatcctc 660  
 ctgctcggtg gaggtatgat ttttactttc tacaaggcac aaggactctc agtcggatct 720  
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 aatgggtcca tgggtgtgtt tgaattcgat aagtttctg ctggaactga ggccgtagca 1020  
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<210> 1626

<211> 401

<212> PRT

<213> *Arabidopsis thaliana*

<400> 1626

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20 25 30

Asn Ser Asn Ile Thr Asp Asp Thr Arg Ile Arg Ala Ala Val Pro Thr  
35 40 45

Ile Lys Tyr Leu Met Gly Asn Gly Ser Arg Val Val Leu Cys Ser His  
50 55 60

Leu Gly Arg Pro Lys Gly Val Thr Pro Lys Tyr Ser Leu Lys Pro Leu  
65 70 75 80

Val Pro Arg Leu Ser Glu Leu Leu Gly Val Glu Val Val Met Ala Asn  
85 90 95

Asp Ser Ile Gly Glu Glu Val Gln Lys Leu Val Ala Gly Leu Pro Glu  
100 105 110



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Gly Gly Val Leu Leu Leu Glu Asn Val Arg Phe Tyr Ala Glu Glu Glu  
115 120 125

Lys Asn Asp Pro Glu Phe Ala Lys Lys Leu Ala Ala Leu Ala Asp Val  
130 135 140

Tyr Val Asn Asp Ala Phe Gly Thr Ala His Arg Ala His Ala Ser Thr  
145 150 155 160

Glu Gly Val Ala Lys Phe Leu Lys Pro Ser Val Ala Gly Phe Leu Met  
165 170 175

Gln Lys Glu Leu Asp Tyr Leu Val Gly Ala Val Ala Asn Pro Lys Lys  
180 185 190

Pro Phe Ala Ala Ile Val Gly Gly Ser Lys Val Ser Thr Lys Ile Gly  
195 200 205

Val Ile Glu Ser Leu Leu Asn Thr Val Asp Ile Leu Leu Leu Gly Gly  
210 215 220

Gly Met Ile Phe Thr Phe Tyr Lys Ala Gln Gly Leu Ser Val Gly Ser  
225 230 235 240

Ser Leu Val Glu Glu Asp Lys Leu Asp Leu Ala Lys Ser Leu Met Glu  
245 250 255

Lys Ala Lys Ala Lys Gly Val Ser Leu Leu Leu Pro Thr Asp Val Val  
260 265 270

Ile Ala Asp Lys Phe Ala Pro Asp Ala Asn Ser Lys Ile Val Pro Ala  
275 280 285

Thr Ala Ile Pro Asp Gly Trp Met Gly Leu Asp Ile Gly Pro Asp Ser  
290 295 300

Ile Lys Thr Phe Ser Glu Ala Leu Asp Thr Thr Lys Thr Ile Ile Trp  
305 310 315 320

Asn Gly Pro Met Gly Val Phe Glu Phe Asp Lys Phe Ala Ala Gly Thr  
325 330 335

Glu Ala Val Ala Lys Gln Leu Ala Glu Leu Ser Gly Lys Gly Val Thr  
340 345 350

Thr Ile Ile Gly Gly Gly Asp Ser Val Ala Ala Val Glu Lys Val Gly

355

360

365

Leu Ala Asp Lys Met Ser His Ile Ser Thr Gly Gly Gly Ala Ser Leu  
 370 375 380

Glu Leu Leu Glu Gly Lys Pro Leu Pro Gly Val Leu Ala Leu Asp Glu  
 385 390 395 400

Ala

&lt;210&gt; 1627

&lt;211&gt; 1353

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1627

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tgggaagtgg tttgcgccga gcacggcatc gatccaaccg gaaggtacac cggagactca	120
gatctgcaac ttgagcgcat caacgtttac tacaatgaag cgagttgcgg tagattcgtt	180
cctcgtgcag tgctcatgga tttggagcct gggactatgg atagtctcag atctggaccg	240
tacggtcaga cctttcgacc tgataacttc gtctttggtc aatccggtgc gggtaacaac	300
tgggccaagg gacactacac tgaaggagct gaactaatcg attccgttct cgatgttggt	360
cgtaagggaag ctgagaactg tgactgcctc caaggggttc aggtttgtca ctcatgtgga	420
ggaggaactg gatctgggat gggaacattg ttgatctcta agatccgtga agagtaccga	480
gatcgcatga tgcttacctt ctcggtgttc ccttcaccaa aggtttctga tactgtggtg	540
gagccttaca acgctacttt atctgttcat cagcttgttg agaatgtga tgagtgcattg	600
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agctttggtg atttgaacca tttgatattt gccactatgt ctggtgtgac ttgctgtctg	720
aggttccctg gtcaactcaa ctctgacctc cgtaagcttg ctgtgaatct catcccattc	780
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atgagcaca aggaagttag cgagcagatg ctgaatgttc agaacaagaa ctcgctctac	1020
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<210> 1628

<211> 450

<212> PRT

<213> Arabidopsis thaliana

<400> 1628

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 20 25 30

Thr Gly Arg Tyr Thr Gly Asp Ser Asp Leu Gln Leu Glu Arg Ile Asn  
 35 40 45

Val Tyr Tyr Asn Glu Ala Ser Cys Gly Arg Phe Val Pro Arg Ala Val  
 50 55 60

Leu Met Asp Leu Glu Pro Gly Thr Met Asp Ser Leu Arg Ser Gly Pro  
 65 70 75 80

Tyr Gly Gln Thr Phe Arg Pro Asp Asn Phe Val Phe Gly Gln Ser Gly  
 85 90 95

Ala Gly Asn Asn Trp Ala Lys Gly His Tyr Thr Glu Gly Ala Glu Leu  
 100 105 110

Ile Asp Ser Val Leu Asp Val Val Arg Lys Glu Ala Glu Asn Cys Asp  
 115 120 125

Cys Leu Gln Gly Phe Gln Val Cys His Ser Leu Gly Gly Gly Thr Gly  
 130 135 140

Ser Gly Met Gly Thr Leu Leu Ile Ser Lys Ile Arg Glu Glu Tyr Pro  
 145 150 155 160

Asp Arg Met Met Leu Thr Phe Ser Val Phe Pro Ser Pro Lys Val Ser  
 Page 2469

Asp Thr Val Val Glu Pro Tyr Asn Ala Thr Leu Ser Val His Gln Leu  
 180 185 190  
 Val Glu Asn Ala Asp Glu Cys Met Val Leu Asp Asn Glu Ala Leu Tyr  
 195 200 205  
 Asp Ile Cys Phe Arg Thr Leu Lys Leu Thr Thr Pro Ser Phe Gly Asp  
 210 215 220  
 Leu Asn His Leu Ile Ser Ala Thr Met Ser Gly Val Thr Cys Cys Leu  
 225 230 235 240  
 Arg Phe Pro Gly Gln Leu Asn Ser Asp Leu Arg Lys Leu Ala Val Asn  
 245 250 255  
 Leu Ile Pro Phe Pro Arg Leu His Phe Phe Met Val Gly Phe Ala Pro  
 260 265 270  
 Leu Thr Ser Arg Gly Ser Gln Gln Tyr Arg Ser Leu Thr Val Pro Glu  
 275 280 285  
 Leu Thr Gln Gln Met Trp Asp Ser Lys Asn Met Met Cys Ala Ala Asp  
 290 295 300  
 Pro Arg His Gly Arg Tyr Leu Thr Ala Ser Ala Met Phe Arg Gly Lys  
 305 310 315 320  
 Met Ser Thr Lys Glu Val Asp Glu Gln Met Leu Asn Val Gln Asn Lys  
 325 330 335  
 Asn Ser Ser Tyr Phe Val Glu Trp Ile Pro Asn Asn Val Lys Ser Thr  
 340 345 350  
 Val Cys Asp Ile Pro Pro Thr Gly Leu Lys Met Ala Ser Thr Phe Ile  
 355 360 365  
 Gly Asn Ser Thr Ser Ile Gln Glu Met Phe Arg Arg Val Ser Glu Gln  
 370 375 380  
 Phe Thr Ala Met Phe Arg Arg Lys Ala Phe Leu His Trp Tyr Thr Gly  
 385 390 395 400  
 Glu Gly Met Asp Glu Met Glu Phe Thr Glu Ala Glu Ser Asn Met Asn  
 405 410 415

Asp Leu Val Ser Glu Tyr Gln Gln Tyr Gln Asp Ala Thr Ala Asp Glu  
 420 425 430

Glu Gly Asp Tyr Glu Asp Glu Glu Glu Gly Glu Tyr Gln Gln Glu Glu  
 435 440 445

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<210> 1629

<211> 723

<212> DNA

<213> *Arabidopsis thaliana*

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 gacgagaaag ctccgtcgaa ggagaaaaag aactacgcgt cgaagaaatc aactaccgta 180  
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<210> 1630

<211> 240

<212> PRT

<213> *Arabidopsis thaliana*

<400> 1630

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 Page 2471

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Ser Ala Ile Lys Ala Ile Ser Gly Asp Glu Lys Ala Pro Ser Lys Glu  
35 40 45  
Lys Lys Asn Tyr Ala Ser Lys Lys Ser Thr Thr Val Ile Gln Lys Ser  
50 55 60  
His Cys Phe Gln Asn Ser Trp Thr Phe Trp Phe Asp Asn Pro Ser Ser  
65 70 75 80  
Lys Ser Asn Gln Val Ile Trp Gly Ser Ser Leu Arg Ser Leu Tyr Thr  
85 90 95  
Phe Gly Thr Ile Glu Glu Phe Trp Ser Leu Tyr Asn Asn Ile His Pro  
100 105 110  
Pro Thr Lys Trp Val Ser Gly Ala Asp Leu Tyr Cys Phe Lys Asp Lys  
115 120 125  
Ile Glu Pro Lys Trp Glu Asp Pro Ile Cys Ala Asn Gly Gly Lys Trp  
130 135 140  
Ser Met Met Phe Pro Lys Ala Thr Leu Glu Cys Asn Trp Leu Asn Thr  
145 150 155 160  
Leu Leu Ala Leu Val Gly Glu Gln Phe Asp Gln Gly Asp Glu Ile Cys  
165 170 175  
Gly Ala Val Leu Asn Phe Arg Ala Arg Gly Asp Arg Ile Ser Leu Trp  
180 185 190  
Thr Lys Asn Ala Ala Asn Glu Glu Ala Gln Leu Ser Ile Gly Lys Gln  
195 200 205  
Trp Lys Glu Leu Leu Gly Tyr Asn Glu Thr Ile Gly Phe Ile Val His  
210 215 220  
Glu Asp Ala Lys Thr Leu Asp Arg Asp Ala Lys Arg Arg Tyr Thr Val  
225 230 235 240  
<210> 1631  
<211> 1734

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1631

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aagaggctcg cgcagaattc gccacggctt aacgtagaga tcatcaacga gaatgagaat     1620
aatgggatgg aacagaatga agaagatgaa agagagaagg ttgataaact ttacctctac     1680

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1734

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<211> 577

<212> PRT

<213> Arabidopsis thaliana

<400> 1632

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Tyr Ala Ile Asn Pro Glu Arg 55 Leu Ile Arg Arg Phe 60 Pro Cys Leu Lys

Ser Leu Thr Leu Lys Gly 70 Lys Pro His Phe Ala 75 Asp Phe Asn Leu Val 80

Pro His Glu Trp Gly 85 Gly Phe Val His Pro 90 Trp Ile Glu Ala Leu Ala 95

Arg Ser Arg Val 100 Gly Leu Glu Glu Leu 105 Arg Leu Lys Arg Met Val Val 110

Thr Asp Glu 115 Ser Leu Asp Leu Leu 120 Ser Arg Ser Phe Ala 125 Asn Phe Lys

Ser Leu Val Leu Val Ser Cys 135 Glu Gly Phe Thr Thr 140 Asp Gly Leu Ala

Ser Ile Ala Ala Asn Cys 150 Arg His Leu Arg Glu 155 Leu Asp Leu Gln Glu 160

Asn Glu Ile Asp Asp 165 His Arg Gly Gln Trp 170 Leu Asn Cys Phe Pro 175 Asp

Ser Cys Thr Thr 180 Leu Met Ser Leu Asn 185 Phe Ala Cys Leu Lys 190 Gly Glu



Thr Asn Val Ala Ala Leu Glu Arg 200 Leu Val Ala Arg Ser 205 Pro Asn Leu  
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 Lys Ser Leu Lys Leu Asn Arg 215 Ala Val Pro Leu Asp 220 Ala Leu Ala Arg  
 210  
 Leu Met Ser Cys Ala Pro Gln Leu Val Asp 235 Leu Gly Val Gly Ser Tyr  
 225 230  
 Glu Asn Glu Pro Asp 245 Pro Glu Ser Phe Ala 250 Lys Leu Met Thr Ala Ile  
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 Lys Lys Tyr Thr 260 Ser Leu Arg Ser Leu 265 Ser Gly Phe Leu Glu Val Ala  
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 Pro Leu Cys 275 Leu Pro Ala Phe Tyr 280 Pro Ile Cys Gln Asn 285 Leu Ile Ser  
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 Asn Ala Ser 355 Val Thr Glu Val Gly 360 Leu Val Ala Ile Ser 365 Ala Gly Cys  
 Pro Lys 370 Leu His Ser Ile Leu 375 Tyr Phe Cys Lys 380 Met Thr Asn Ala  
 Ala Leu Ile Ala Val 390 Ala Lys Asn Cys Pro 395 Asn Phe Ile Arg Phe Arg  
 385 400  
 Leu Cys Ile Leu Glu 405 Pro His Lys Pro Asp 410 His Ile Thr Phe Gln Ser  
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 Leu Asp Glu Gly 420 Phe Gly Ala Ile Val 425 Gln Ala Cys Lys Gly 430 Leu Arg  
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Gly Met Tyr Ala Glu Gln Leu Glu Met Leu Ser Ile Ala Phe Ala Gly  
 450 455 460  
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 465 470 475 480  
 Arg Lys Leu Glu Ile Arg Asp Ser Pro Phe Gly Asn Ala Ala Leu Leu  
 485 490 495  
 Ala Asp Val Gly Arg Tyr Glu Thr Met Arg Ser Leu Trp Met Ser Ser  
 500 505 510  
 Cys Glu Val Thr Leu Gly Gly Cys Lys Arg Leu Ala Gln Asn Ser Pro  
 515 520 525  
 Arg Leu Asn Val Glu Ile Ile Asn Glu Asn Glu Asn Asn Gly Met Glu  
 530 535 540  
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<210> 1633

<211> 735

<212> DNA

<213> Arabidopsis thaliana

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accgaggaga attaa	735

&lt;210&gt; 1634

&lt;211&gt; 244

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1634

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			20					25					30		

Tyr	Thr	Val	Trp	Ala	Ala	Ala	Ser	Pro	Gly	Gly	Gly	Arg	Arg	Leu	Asp
		35					40					45			

Ala	Gly	Gln	Ser	Trp	Arg	Leu	Asp	Val	Ala	Ala	Gly	Thr	Lys	Met	Ala
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Arg	Ile	Trp	Gly	Arg	Thr	Asn	Cys	Asn	Phe	Asp	Ser	Ser	Gly	Arg	Gly
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Arg	Cys	Gln	Thr	Gly	Asp	Cys	Ser	Gly	Gly	Leu	Gln	Cys	Thr	Gly	Trp
				85					90					95	

Gly	Gln	Pro	Pro	Asn	Thr	Leu	Ala	Glu	Tyr	Ala	Leu	Asn	Gln	Phe	Asn
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Asn	Leu	Asp	Phe	Tyr	Asp	Ile	Ser	Leu	Val	Asp	Gly	Phe	Asn	Ile	Pro
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Met	Glu	Phe	Ser	Pro	Thr	Ser	Ser	Asn	Cys	His	Arg	Ile	Leu	Cys	Thr
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Ala	Asp	Ile	Asn	Gly	Gln	Cys	Pro	Asn	Val	Leu	Arg	Ala	Pro	Gly	Gly
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Cys Asn Asn Pro Cys Thr Val Phe Gln Thr Asn Gln Tyr Cys Thr  
165 170 175

Asn Gly Gln Gly Ser Cys Ser Asp Thr Glu Tyr Ser Arg Phe Phe Lys  
180 185 190

Gln Arg Cys Pro Asp Ala Tyr Ser Tyr Pro Gln Asp Asp Pro Thr Ser  
195 200 205

Thr Phe Thr Cys Thr Asn Thr Asn Tyr Arg Val Val Phe Cys Pro Arg  
210 215 220

Ser Arg Leu Gly Ala Thr Gly Ser His Gln Leu Pro Ile Lys Met Val  
225 230 235 240

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<211> 684

<212> DNA

<213> Arabidopsis thaliana

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<210> 1636

&lt;211&gt; 227

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1636

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Val Met Arg Ala Arg Ile Ala Leu His Leu Lys Ser Ile Ser Tyr Glu  
 20 25 30

Phe Leu Gln Glu Thr Tyr Gly Ser Lys Ser Glu Leu Leu Lys Ser  
 35 40 45

Asn Pro Val His Lys Lys Met Pro Val Leu Ile His Ala Asp Lys Pro  
 50 55 60

Val Cys Glu Ser Asn Ile Ile Val His Tyr Ile Asp Glu Ala Trp Asn  
 65 70 75 80

Ser Ser Gly Pro Ser Ile Leu Pro Ser His Pro Tyr Asp Arg Ala Ile  
 85 90 95

Ala Arg Phe Trp Ala Ala Tyr Ile Asp Asp Gln Trp Phe Ile Ser Val  
 100 105 110

Arg Ser Ile Leu Thr Ala Gln Gly Asp Glu Glu Lys Lys Ala Ala Ile  
 115 120 125

Ala Gln Val Glu Glu Arg Thr Lys Leu Leu Glu Lys Ala Phe Asn Asp  
 130 135 140

Cys Ser Gln Gly Lys Pro Phe Phe Asn Gly Asp His Ile Gly Tyr Leu  
 145 150 155 160

Asp Ile Ala Leu Gly Ser Phe Leu Gly Trp Trp Arg Val Val Glu Leu  
 165 170 175

Asp Ala Asn His Lys Phe Leu Asp Glu Thr Lys Thr Pro Ser Leu Val  
 180 185 190

Lys Trp Ala Glu Arg Phe Cys Asp Asp Pro Ala Val Lys Pro Ile Met  
 195 200 205

Pro Glu Ile Thr Lys Leu Ala Glu Phe Ala Arg Lys Leu Phe Pro Lys  
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210

215

Arg Gln Ala  
225

&lt;210&gt; 1637

&lt;211&gt; 1275

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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aagttaaattg caggaatcca aataaggcca aagaagaaca ggtctcgta ccatgtttcg	180
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&lt;210&gt; 1638

&lt;211&gt; 424

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1638

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35 40 45Arg Pro Lys Lys Asn Arg Ser Arg Tyr His Val Ser Val Met Asn Val  
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85 90 95Asp Glu Met Lys Leu Cys Leu Leu Leu Asn Val Ile Asp Pro Lys Ile  
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115 120 125Val Arg Ser Leu Val Asp Leu Leu Pro Glu Ile Asn Val Val Ala Gly  
130 135 140Asp Pro Tyr Asn Ser Asp Pro Ile Asp Pro Glu Phe Met Gly Val Glu  
145 150 155 160Val Arg Glu Arg Val Glu Lys Gly Glu Gln Val Pro Val Ile Ala Thr  
165 170 175Lys Ile Asn Met Val Asp Leu Pro Leu Gly Ala Thr Glu Asp Arg Val  
180 185 190Cys Gly Thr Ile Asp Ile Glu Lys Ala Leu Thr Glu Gly Val Lys Ala  
195 200 205

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Phe Glu Pro Gly Leu Leu Ala Lys Ala Asn Arg Gly Ile Leu Tyr Val  
210 215 220

Asp Glu Val Asn Leu Leu Asp Asp His Leu Val Asp Val Leu Leu Asp  
225 230 235 240

Ser Ala Ala Ser Gly Trp Asn Thr Val Glu Arg Glu Gly Ile Ser Ile  
245 250 255

Ser His Pro Ala Arg Phe Ile Leu Ile Gly Ser Gly Asn Pro Glu Glu  
260 265 270

Gly Glu Leu Arg Pro Gln Leu Leu Asp Arg Phe Gly Met His Ala Gln  
275 280 285

Val Gly Thr Val Arg Asp Ala Asp Leu Arg Val Lys Ile Val Glu Glu  
290 295 300

Arg Ala Arg Phe Asp Ser Asn Pro Lys Asp Phe Arg Asp Thr Tyr Lys  
305 310 315 320

Thr Glu Gln Asp Lys Leu Gln Asp Gln Ile Ser Thr Ala Arg Ala Asn  
325 330 335

Leu Ser Ser Val Gln Ile Asp Arg Glu Leu Lys Val Lys Ile Ser Arg  
340 345 350

Val Cys Ser Glu Leu Asn Val Asp Gly Leu Arg Gly Asp Ile Val Thr  
355 360 365

Asn Arg Ala Ala Lys Ala Leu Ala Ala Leu Lys Gly Lys Asp Arg Val  
370 375 380

Thr Pro Asp Asp Val Ala Thr Val Ile Pro Asn Cys Leu Arg His Arg  
385 390 395 400

Leu Arg Lys Asp Pro Leu Glu Ser Ile Asp Ser Gly Val Leu Val Ser  
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Glu Lys Phe Ala Glu Ile Phe Ser  
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<210> 1639

<211> 1161

<212> DNA



<213> *Arabidopsis thaliana*

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gcggcgattc ctaagcactg ttgggttaag agtcctttga gatcaatgag ttacgtcgtc      180
agagacatta tcgccctgcg ggctttggcc atcgctgccg tgtatgttga tagctggttc      240
ctttggcctc tttattgggc cgccaagga acacttttct gggccatctt tgttctcggc      300
cacgactgtg gacatgggag tttctcagac attcctctac tgaatagtgt ggttggtcac      360
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gccagaaag cagctaaaca tgtgttggga agatactaca gagaaccaa gacgtcagga     1020
gcaataaccg tccacttggt ggagagtttg gtcgcaagta ttaagaaaga tcattacgtc     1080
agcgacactg gtgatattgt cttctacgag acagatccag atctctacgt ttacgcttct     1140
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&lt;210&gt; 1640

&lt;211&gt; 386

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1640

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Met Val Val Ala Met Asp Gln Arg Thr Asn Val Asn Gly Asp Pro Gly
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Ala Gly Asp Arg Lys Lys Glu Glu Arg Phe Asp Pro Ser Ala Gln Pro
Page 2483

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Pro Phe Lys Ile Gly Asp Ile Arg Ala Ala Ile Pro Lys His Cys Trp  
35 40 45

Val Lys Ser Pro Leu Arg Ser Met Ser Tyr Val Val Arg Asp Ile Ile  
50 55 60

Ala Val Ala Ala Leu Ala Ile Ala Ala Val Tyr Val Asp Ser Trp Phe  
65 70 75 80

Leu Trp Pro Leu Tyr Trp Ala Ala Gln Gly Thr Leu Phe Trp Ala Ile  
85 90 95

Phe Val Leu Gly His Asp Cys Gly His Gly Ser Phe Ser Asp Ile Pro  
100 105 110

Leu Leu Asn Ser Val Val Gly His Ile Leu His Ser Phe Ile Leu Val  
115 120 125

Pro Tyr His Gly Trp Arg Ile Ser His Arg Thr His His Gln Asn His  
130 135 140

Gly His Val Glu Asn Asp Glu Ser Trp Val Pro Leu Pro Glu Arg Val  
145 150 155 160

Tyr Lys Lys Leu Pro His Ser Thr Arg Met Leu Arg Tyr Thr Val Pro  
165 170 175

Leu Pro Met Leu Ala Tyr Pro Leu Tyr Leu Cys Tyr Arg Ser Pro Gly  
180 185 190

Lys Glu Gly Ser His Phe Asn Pro Tyr Ser Ser Leu Phe Ala Pro Ser  
195 200 205

Glu Arg Lys Leu Ile Ala Thr Ser Thr Thr Cys Trp Ser Ile Met Phe  
210 215 220

Val Ser Leu Ile Ala Leu Ser Phe Val Phe Gly Pro Leu Ala Val Leu  
225 230 235 240

Lys Val Tyr Gly Val Pro Tyr Ile Ile Phe Val Met Trp Leu Asp Ala  
245 250 255

Val Thr Tyr Leu His His His Gly His Asp Glu Lys Leu Pro Trp Tyr  
260 265 270

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Arg Gly Lys Glu Trp Ser Tyr Leu Arg Gly Gly Leu Thr Thr Ile Asp  
275 285

Arg Asp Tyr Gly Ile Phe Asn Asn Ile His His Asp Ile Gly Thr His  
290 295 300

Val Ile His His Leu Phe Pro Gln Ile Pro His Tyr His Leu Val Asp  
305 310 315 320

Ala Thr Lys Ala Ala Lys His Val Leu Gly Arg Tyr Tyr Arg Glu Pro  
325 330 335

Lys Thr Ser Gly Ala Ile Pro Ile His Leu Val Glu Ser Leu Val Ala  
340 345 350

Ser Ile Lys Lys Asp His Tyr Val Ser Asp Thr Gly Asp Ile Val Phe  
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<210> 1642

<211> 93

<212> PRT

<213> Arabidopsis thaliana

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20 25 30Ile Phe Met Tyr Arg Gly Asp Lys Ala Phe Cys Ser Asn Glu Cys Arg  
35 40 45Glu Glu Gln Ile Glu Ser Asp Glu Ala Lys Glu Arg Lys Trp Lys Lys  
50 55 60Ser Ser Arg Ser Leu Arg Lys Asn Ser Ser Glu Thr Lys Glu Ser Ala  
65 70 75 80Ala Gly Asn Thr Val Arg Thr Gly Thr Leu Val Val Ala  
85 90

&lt;210&gt; 1643

&lt;211&gt; 693

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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&lt;210&gt; 1644

&lt;211&gt; 230

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1644

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Val Gly Val Ile Pro Ser Ser Lys Lys Gly Leu Ser Phe Leu Val Lys  
 20 25 30

Ala Glu His His Ser Ser Ser Ser Ser His Leu Gln Asp Lys Cys  
 35 40 45

Gln Arg Arg Leu Ile Val Thr Phe Gly Val Val Ala Pro Trp Ile Ser  
 50 55 60

Leu Leu Ser Arg Ala Pro Leu Ser Phe Ala Ala Glu Ser Lys Lys Gly  
 65 70 75 80

Phe Leu Ala Val Ser Asp Asn Lys Asp Ala Tyr Ala Phe Leu Tyr Pro  
 85 90 95

Phe Gly Trp Gln Glu Val Val Ile Glu Gly Gln Asp Lys Val Tyr Lys  
 100 105 110

Asp Val Ile Glu Pro Leu Glu Ser Val Ser Val Asn Leu Val Pro Thr  
 115 120 125

Ser Lys Gln Thr Ile Lys Glu Phe Gly Pro Pro Lys Gln Ile Ala Glu  
 130 135 140

Thr Leu Ile Lys Lys Val Leu Ala Pro Pro Asn Gln Lys Thr Thr Leu  
 145 150 155 160

Ile Asp Ala Ser Glu His Asp Val Asp Gly Lys Thr Tyr Tyr Gln Phe  
 165 170 175

Glu Phe Thr Val Gln Ala Arg Asn Tyr Thr Arg His Ala Leu Gly Thr  
 180 185 190

Ile Thr Val Phe Asn Gly Asn Phe Tyr Thr Leu Thr Thr Gly Ala Asn  
 195 200 205

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Glu Arg Arg Trp Glu Lys Met Lys Asp Arg Leu His Thr Val Val Asp  
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Ser Phe Lys Ile Thr Val  
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<210> 1645

<211> 456

<212> DNA

<213> Arabidopsis thaliana

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atatctcaac ttgagttggg agaaggaatg aaggacatgg ggatgaagat aacagcagaa 360  
gaagcggagc atatggtccg agaagccgac cttgatggcg atggttttct ttctttccac 420  
gaattctcta aaatgatgat tgctgcctct tattag 456

<210> 1646

<211> 151

<212> PRT

<213> Arabidopsis thaliana

<400> 1646

Met Ala Asp Ala Phe Thr Asp Glu Gln Ile Gln Glu Phe Tyr Glu Ala  
1 5 10 15

Phe Cys Leu Ile Asp Lys Asp Ser Asp Gly Phe Ile Thr Lys Glu Lys  
20 25 30

Leu Thr Lys Val Met Lys Ser Met Gly Lys Asn Pro Lys Ala Glu Gln  
35 40 45

Leu Gln Gln Met Met Ser Asp Val Asp Ile Phe Gly Asn Gly Gly Ile  
50 55 60

047-E2F-PCT.ST25.txt

Thr Phe Asp Asp Phe Leu Tyr Ile Met Ala Gln Asn Thr Ser Gln Glu  
65 70 75 80

Ser Ala Ser Asp Glu Leu Ile Glu Val Phe Arg Val Phe Asp Arg Asp  
85 90 95

Gly Asp Gly Leu Ile Ser Gln Leu Glu Leu Gly Glu Gly Met Lys Asp  
100 105 110

Met Gly Met Lys Ile Thr Ala Glu Glu Ala Glu His Met Val Arg Glu  
115 120 125

Ala Asp Leu Asp Gly Asp Gly Phe Leu Ser Phe His Glu Phe Ser Lys  
130 135 140

Met Met Ile Ala Ala Ser Tyr  
145 150

<210> 1647

<211> 474

<212> DNA

<213> Arabidopsis thaliana

<400> 1647  
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gcctccaacg gcaagatttg cgttcttctt gcttcgcttt ctctcgctac gggttgtaga 120  
cggagtctgt cctctctcac ttcttcgctt tcttcgcaat tgcttcattg ctctgtttctc 180  
tcgtcgctgt tttccctagc gtctccattt tctggtttgt ccattgcgtt tgatctcagc 240  
agtcaaaacta gtggactgaa tggccagaga cgcagaggcc ttgtggtttag agctggaaaa 300  
gctgctctgt gtcaaaactaa gagaagcaga tcaagaaaat ctctagctag gactcatggt 360  
ttcgcgtaga ggatgaggac cactagcggg agagcaacca taaagcgctc acgtgccaaag 420  
ggacgttgga acctctgtcc caagtccaac cctagcagcg gcaaacgggc ttga 474

<210> 1648

<211> 157

<212> PRT

<213> Arabidopsis thaliana

047-E2F-PCT.ST25.txt

<400> 1648

Met Ala Ser Leu Ser Thr Ser Val Val Ala Ser Ala Ser Ser Arg Leu  
1 5 10 15

Trp Asn Pro Ala Ala Ser Asn Gly Lys Ile Cys Val Pro Ser Ala Ser  
20 25 30

Leu Ser Leu Arg Thr Gly Cys Arg Arg Ser Ser Ser Ser Leu Thr Ser  
35 40 45

Ser Ala Ser Ser Gln Leu Leu His Cys Ser Phe Leu Ser Ser Pro Val  
50 55 60

Ser Leu Ala Ser Pro Phe Ser Gly Leu Ser Ile Ala Phe Asp Leu Ser  
65 70 75 80

Ser Gln Thr Ser Gly Leu Asn Gly Gln Arg Arg Arg Gly Leu Val Val  
85 90 95

Arg Ala Gly Lys Ala Ala Leu Cys Gln Thr Lys Arg Ser Arg Ser Arg  
100 105 110

Lys Ser Leu Ala Arg Thr His Gly Phe Arg Arg Arg Met Arg Thr Thr  
115 120 125

Ser Gly Arg Ala Thr Ile Lys Arg Arg Arg Ala Lys Gly Arg Trp Asn  
130 135 140

Leu Cys Pro Lys Ser Asn Pro Ser Ser Gly Lys Arg Ala  
145 150 155

<210> 1649

<211> 390

<212> DNA

<213> Arabidopsis thaliana

<400> 1649  
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cagagatctg aatctctttc cgataatcca tctctcactc ttctaccgga cggattcgac 120

tggccgatct ctactccga tgaattcgat atcatcgacg gtgaagaag ctctgaagtt 180

acggaggaag acgacggcgt aacagatcga cggtcattgt actggcggag gacgaagtat 240

tacatatcgt acggtgcatt gtcggcgaat agagtgccat gtctctccag atctggaaga 300



047-E2F-PCT.ST25.txt

tcgtactaca ctcataactg cttcagagct agaggtcccg ttcacccgta tagccgaggc 360  
tgctcgtcga tcactcgatg ccggagatag 390

<210> 1650

<211> 129

<212> PRT

<213> Arabidopsis thaliana

<400> 1650

Met Ala Ala Ser Ser Leu Asn Leu Leu Leu Ile Leu Ser Leu Leu Thr  
1 5 10 15

Phe Ile Ser Leu Gln Arg Ser Glu Ser Leu Ser Asp Asn Pro Ser Leu  
20 25 30

Thr Leu Leu Pro Asp Gly Phe Asp Trp Pro Ile Ser His Ser Asp Glu  
35 40 45

Phe Asp Ile Ile Asp Gly Glu Glu Ser Phe Glu Val Thr Glu Glu Asp  
50 55 60

Asp Gly Val Thr Asp Arg Arg Ser Leu Tyr Trp Arg Arg Thr Lys Tyr  
65 70 75 80

Tyr Ile Ser Tyr Gly Ala Leu Ser Ala Asn Arg Val Pro Cys Pro Pro  
85 90 95

Arg Ser Gly Arg Ser Tyr Tyr Thr His Asn Cys Phe Arg Ala Arg Gly  
100 105 110

Pro Val His Pro Tyr Ser Arg Gly Cys Ser Ser Ile Thr Arg Cys Arg  
115 120 125

Arg

<210> 1651

<211> 615

<212> DNA

<213> Arabidopsis thaliana

<400> 1651  
 atgggaagtg tacagttgag tggttccggc ctagtagctt ctctacctcc aaatcatagc 60  
 ttttagccaca agaccaaact taataagcca aattcgtact tctttcgtc aaaacacaat 120  
 gccgcaagaa ccaaaaccgt ccgagccata agcaccgcac cagcgagcca gcctccagcc 180  
 gctgatgagc ccgacgaacc tcctgctgtc gatTTTgcgt tcgtccattc ggtgttgttg 240  
 ccggacggga cccggacgt acattggaga agagcgaacg gtggacagaa actaagagac 300  
 ataatgttgg attctaact cgaactctat ggtccttata gtaagccttt gtcaaaactgc 360  
 gcaggagtag gaacttgcgc tacttgcatg gtcgagattg taaatggaaa ggagcttcta 420  
 aatcccgcaa ctgatattga gaaggagaaa ctcaaaagga aaccaaaaaa ttggagacta 480  
 gcttgtaaaa ccaacgtggg aaatccagat tctaccggat tggttgtcat acaacaattg 540  
 ccagagtgga aagctcatga gtggaacatc cctaagaata tacctaataga cgatgatctc 600  
 gaaacttcta cttga 615

<210> 1652

<211> 204

<212> PRT

<213> *Arabidopsis thaliana*

<400> 1652

Met Gly Ser Val Gln Leu Ser Gly Ser Gly Leu Val Ala Ser Leu Pro  
 1 5 10 15

Pro Asn His Ser Phe Ser His Lys Thr Lys Leu Asn Lys Pro Asn Ser  
 20 25 30

Tyr Phe Phe Arg Ser Lys His Asn Ala Ala Arg Thr Lys Thr Val Arg  
 35 40 45

Ala Ile Ser Thr Ala Pro Ala Ser Gln Pro Pro Ala Ala Asp Glu Pro  
 50 55 60

Asp Glu Pro Pro Ala Val Asp Phe Ala Phe Val His Ser Val Leu Leu  
 65 70 75 80

Pro Asp Gly Thr Pro Asp Val His Trp Arg Arg Ala Asn Gly Gly Gln  
 85 90 95

Lys Leu Arg Asp Ile Met Leu Asp Ser Asn Ile Glu Leu Tyr Gly Pro  
 100 105 110

Tyr Ser Lys Pro Leu Ser Asn Cys Ala Gly Val Gly Thr Cys Ala Thr  
 115 120 125

Cys Met Val Glu Ile Val Asn Gly Lys Glu Leu Leu Asn Pro Arg Thr  
 130 135 140

Asp Ile Glu Lys Glu Lys Leu Lys Arg Lys Pro Lys Asn Trp Arg Leu  
 145 150 155 160

Ala Cys Gln Thr Asn Val Gly Asn Pro Asp Ser Thr Gly Leu Val Val  
 165 170 175

Ile Gln Gln Leu Pro Glu Trp Lys Ala His Glu Trp Asn Ile Pro Lys  
 180 185 190

Asn Ile Pro Asn Asp Asp Asp Leu Glu Thr Ser Thr  
 195 200

<210> 1653

<211> 1344

<212> DNA

<213> Arabidopsis thaliana

<400> 1653  
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 aagagtgcc aatcactctt cctgctcaa tgcctctcca agaggctaga agtcagtgaa 120  
 ttctccggct tgcgtatgag tagtatcggt ggggaagcat ctttcttcga tgcgtagct 180  
 gcacaaatca tccttaagcg tgtgacaaca tcaactcctg ttagaggaga gacagtggcg 240  
 aaactgaaag ttgcgattaa cgggttttggaggattggt ggaactttct taggtgttg 300  
 catggctcgt aagactctcc tctcgaagtt gttgtactta acgacagtgg tgggtgtcaag 360  
 aatgcatccc acttgcttaa gtatgactcc atgcttgaa ccttcaaggc tgaagtga 420  
 attgtggaca atgaaactat tagtgttgat ggtaagctca tcaaagttgt ctccaacaga 480  
 gaccctctta agcttccatg ggctgagctc ggcattgaca ttgttatcga gggaacagga 540  
 gtgtttgttg atgggccagg agcagggaag catatccaag ccggagcctc gaaagttatc 600  
 atcactgcac cagccaaagg tgctgatatc cctacctatg ttatgggagt caatgagcaa 660  
 gactatggtc acgatgtcgc taacattatt agcaatgcat cttgaccac caactgtttg 720  
 gcaccttttg ctaaaagtctt ggatgaagaa ttggaattg tcaaggggac aatgacaacc 780

```

acacactcct acaccggaga ccaaaggctt ctagatgcat cacacagggg cctaaggcgt      840
gcaagagccg cagcactgaa catagtgcct accagcacag gagcagccaa ggcggtgtca      900
ttagtgttgc cgcagctgaa gggtaaactt aacggcattg cactccgtgt gccaacacca      960
aacgtctcag tggttgacct tgttataaac gttgagaaga aaggtttgac agcagaggat    1020
gtgaacgagg cctttagaaa agccgctaata ggaccgatga aaggcatttt agacgtttgc    1080
gatgcgcctc ttgtctctgt tgacttcagg tgctctgatg tctctaccac cattgactcg    1140
tccctcacta tggttatggg tgatgatatg gtcaagggtg ttgcttggtg tgataacgag    1200
tggggttaca gccaaagagt ggtggatttg gctcacctag tggctagcaa gtggccggga    1260
gcggaagctg ttggaagtg agatcctttg gaggatttct gcaagacaaa cccggctgat    1320
gaggaatgca aagtctatga ctga                                           1344

```

&lt;210&gt; 1654

&lt;211&gt; 447

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1654

```

Met Ala Thr His Ala Ala Leu Ala Val Ser Arg Ile Pro Val Thr Gln
1           5           10           15

```

```

Arg Leu Gln Ser Lys Ser Ala Ile His Ser Phe Pro Ala Gln Cys Ser
          20           25           30

```

```

Ser Lys Arg Leu Glu Val Ala Glu Phe Ser Gly Leu Arg Met Ser Ser
          35           40           45

```

```

Ile Gly Gly Glu Ala Ser Phe Phe Asp Ala Val Ala Ala Gln Ile Ile
          50           55           60

```

```

Pro Lys Ala Val Thr Thr Ser Thr Pro Val Arg Gly Glu Thr Val Ala
65           70           75           80

```

```

Lys Leu Lys Val Ala Ile Asn Gly Phe Gly Arg Ile Gly Arg Asn Phe
          85           90           95

```

```

Leu Arg Cys Trp His Gly Arg Lys Asp Ser Pro Leu Glu Val Val Val
          100          105          110

```

```

Leu Asn Asp Ser Gly Gly Val Lys Asn Ala Ser His Leu Leu Lys Tyr
          115          120          125

```

047-E2F-PCT.ST25.txt

Asp Ser Met Leu Gly Thr Phe Lys Ala Glu Val Lys Ile Val Asp Asn  
 130 135 140  
 Glu Thr Ile Ser Val Asp Gly Lys Leu Ile Lys Val Val Ser Asn Arg  
 145 150 155 160  
 Asp Pro Leu Lys Leu Pro Trp Ala Glu Leu Gly Ile Asp Ile Val Ile  
 165 170 175  
 Glu Gly Thr Gly Val Phe Val Asp Gly Pro Gly Ala Gly Lys His Ile  
 180 185 190  
 Gln Ala Gly Ala Ser Lys Val Ile Ile Thr Ala Pro Ala Lys Gly Ala  
 195 200 205  
 Asp Ile Pro Thr Tyr Val Met Gly Val Asn Glu Gln Asp Tyr Gly His  
 210 215 220  
 Asp Val Ala Asn Ile Ile Ser Asn Ala Ser Cys Thr Thr Asn Cys Leu  
 225 230 235 240  
 Ala Pro Phe Ala Lys Val Leu Asp Glu Glu Phe Gly Ile Val Lys Gly  
 245 250 255  
 Thr Met Thr Thr Thr His Ser Tyr Thr Gly Asp Gln Arg Leu Leu Asp  
 260 265 270  
 Ala Ser His Arg Asp Leu Arg Arg Ala Arg Ala Ala Ala Leu Asn Ile  
 275 280 285  
 Val Pro Thr Ser Thr Gly Ala Ala Lys Ala Val Ser Leu Val Leu Pro  
 290 295 300  
 Gln Leu Lys Gly Lys Leu Asn Gly Ile Ala Leu Arg Val Pro Thr Pro  
 305 310 315 320  
 Asn Val Ser Val Val Asp Leu Val Ile Asn Val Glu Lys Lys Gly Leu  
 325 330 335  
 Thr Ala Glu Asp Val Asn Glu Ala Phe Arg Lys Ala Ala Asn Gly Pro  
 340 345 350  
 Met Lys Gly Ile Leu Asp Val Cys Asp Ala Pro Leu Val Ser Val Asp  
 355 360 365  
 Phe Arg Cys Ser Asp Val Ser Thr Thr Ile Asp Ser Ser Leu Thr Met  
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370

375

Val Met Gly Asp Asp Met Val Lys Val Val Ala Trp Tyr Asp Asn Glu  
385 390 395 400

Trp Gly Tyr Ser Gln Arg Val Val Asp Leu Ala His Leu Val Ala Ser  
405 410 415

Lys Trp Pro Gly Ala Glu Ala Val Gly Ser Gly Asp Pro Leu Glu Asp  
420 425 430

Phe Cys Lys Thr Asn Pro Ala Asp Glu Glu Cys Lys Val Tyr Asp  
435 440 445

&lt;210&gt; 1655

&lt;211&gt; 582

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

<400> 1655  
atggcgaaca tgaacgtctt tcaacaaatg atcttcccag acgagaacgc tccaattcat 60  
cgcaaaaagt ctgtcactgc tgcttctgtg aaatccaaag ggactgtact tggtcagaag 120  
aaacctggag gagctcgtaa ggctctgaat gatattacaa acaagtctgg gattcatgcg 180  
aaagctgctg cttcttcaaa gaacaagcaa attgcttctg ctgctgtgaa agagattgat 240  
atagctgggg aaaggttttt acatgatcac agcaaatgca tcaaagaaca gcaaaatctt 300  
tgggatgac actactctgc tgatctcatg ctacttcac atggttccag catcaaggag 360  
aagcatctca attgggacat tgaaaagatg gatgctaagg acgatctgac ttacgaagaa 420  
ccagaagaga tggcatcgcc caagttttct gattggctga agaactcgac tccatggcgc 480  
tctccaatcc gtcatggctc tatgatgcct tccactcctc tggcttggcg gttcgattca 540  
tgcaattca cacttaaga agactctgac gacctcttct ga 582

&lt;210&gt; 1656

&lt;211&gt; 193

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1656

047-E2F-PCT.ST25.txt

Met Ala Asn Met Asn Ala Leu Gln Gln Met Ile Phe Pro Asp Glu Asn  
1 5 10 15

Ala Pro Ile His Arg Lys Lys Ser Val Thr Ala Ala Ser Val Lys Ser  
20 25 30

Lys Gly Thr Val Leu Gly Gln Lys Lys Pro Gly Gly Ala Arg Lys Ala  
35 40 45

Leu Asn Asp Ile Thr Asn Lys Ser Gly Ile His Ala Lys Ala Ala Ala  
50 55 60

Ser Ser Lys Asn Lys Gln Ile Ala Ser Ala Ala Val Lys Glu Ile Asp  
65 70 75 80

Ile Ala Gly Glu Arg Phe Leu His Asp His Ser Lys Cys Ile Lys Glu  
85 90 95

Gln Gln Asn Leu Trp Asp Asp His Tyr Ser Ala Asp Leu Met Leu Leu  
100 105 110

His His Gly Ser Ser Ile Lys Glu Lys His Leu Asn Trp Asp Ile Glu  
115 120 125

Lys Met Asp Ala Lys Asp Asp Leu Thr Tyr Glu Glu Pro Glu Glu Met  
130 135 140

Ala Ser Pro Lys Phe Ser Asp Trp Leu Lys Asn Ser Thr Pro Trp Arg  
145 150 155 160

Ser Pro Ile Arg His Gly Ser Met Met Pro Ser Thr Pro Leu Ala Trp  
165 170 175

Arg Phe Asp Ser Cys Glu Phe Thr Leu Lys Glu Asp Ser Asp Asp Leu  
180 185 190

Phe

<210> 1657

<211> 783

<212> DNA

<213> Arabidopsis thaliana

<400> 1657

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atgatggaaa cagctctgct ccggtactgc gtcaactttt ccggtcacaa gaaaatctct 60
gctcatcaaa gaagtaatag tgagattccg aaaacgagtc cgggaggatg cgaagacgag 120
tggtgtgcta gggttttgag tagaagatcg gtaatggcgt cagggttggg ctctctgacg 180
acggcttttag catttccaag ggaaggattg gctgtcgtaa aacaaggctt tctcgtctggg 240
agagttcctg gctgtgccga acctgatgaa gaaggttgga gaacataccg tagaccagac 300
gagaagtcag gagggcatgg tgttggttgg agtcctatta tcccttacgc cttttcggtt 360
cctcaagatt ggaatgaggt acctgtatcg atcgctgac ttggtggcac cgagattgac 420
ttgagatttg ctagtccata agaaggccgt ttgtctgtta ttgtagctcc tgttcttaga 480
tttcagata acctcgggga cgatgttaag attgaaaata ttggacaacc agcgaagggt 540
attaacgcgt ttggaccaga agttattgga gaaaacgtag aaggggaagg gttaagttcc 600
aatgttcgag aacacgatgg tagactctat taccaattcg agctagagcc gcctcatgta 660
ctgataactg caacagctgc cggaaaccgc ctttacttgt tcagtgtcac cggaaacggt 720
cttcaatgga agagacacta caaggatctg aaggagtag ctagttcatt ccgattgtt 780
tag 783

```

&lt;210&gt; 1658

&lt;211&gt; 260

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1658

```

Met Met Glu Thr Ala Leu Leu Arg Tyr Cys Val Asn Phe Ser Gly His
1      5      10      15

```

```

Lys Lys Ile Ser Ala His Gln Arg Ser Asn Ser Glu Ile Pro Lys Thr
20      25      30

```

```

Ser Pro Gly Gly Cys Glu Asp Glu Trp Cys Ala Arg Val Leu Ser Arg
35      40      45

```

```

Arg Ser Val Met Ala Ser Gly Leu Val Ser Ser Thr Thr Ala Leu Ala
50      55      60

```

```

Phe Pro Arg Glu Gly Leu Ala Val Val Lys Gln Gly Leu Leu Ala Gly
65      70      75      80

```

```

Arg Val Pro Gly Leu Ser Glu Pro Asp Glu Glu Gly Trp Arg Thr Tyr
85      90      95

```



047-E2F-PCT.ST25.txt

Arg Arg Pro Asp Glu Lys Ser Gly Gly His Gly Val Gly Trp Ser Pro  
100 105 110

Ile Ile Pro Tyr Ala Phe Ser Val Pro Gln Asp Trp Asn Glu Val Pro  
115 120 125

Val Ser Ile Ala Asp Leu Gly Gly Thr Glu Ile Asp Leu Arg Phe Ala  
130 135 140

Ser Pro Lys Glu Gly Arg Leu Ser Val Ile Val Ala Pro Val Leu Arg  
145 150 155 160

Phe Ala Asp Asn Leu Gly Asp Asp Val Lys Ile Glu Asn Ile Gly Gln  
165 170 175

Pro Ala Lys Val Ile Asn Ala Phe Gly Pro Glu Val Ile Gly Glu Asn  
180 185 190

Val Glu Gly Lys Val Leu Ser Ser Asn Val Ala Glu His Asp Gly Arg  
195 200 205

Leu Tyr Tyr Gln Phe Glu Leu Glu Pro Pro His Val Leu Ile Thr Ala  
210 215 220

Thr Ala Ala Gly Asn Arg Leu Tyr Leu Phe Ser Val Thr Gly Asn Gly  
225 230 235 240

Leu Gln Trp Lys Arg His Tyr Lys Asp Leu Lys Arg Ile Ala Ser Ser  
245 250 255

Phe Arg Ile Val  
260

<210> 1659

<211> 960

<212> DNA

<213> Arabidopsis thaliana

<400> 1659  
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tcaattcaat ctaagttatc accatcttctc attccaatg cggcacctgc aaaggcgggtg 120  
aagttgcgat tcaatggaaa gtccttgaga gcaaaaccaa tggatatacag atcatctcgc 180

```

tccgttgagg tcacctgctc tgcttcatct tctctgacga ctcttcccctc tgctcttctc 240
ttcgattgcg atggcgttct tgttgatacc gagaaggacg gtcacaggat ctcccttaac 300
gacactttca aagagagaga ttggaatgtt acgtgggatg ttgatttata cggcgagtta 360
cttaaaatcg gtggtggtaa agaaaggatg actgcgtatt ttaacaagggt tggttggcca 420
gagaaagctc ctaaagatga agcagagagg aaagagtcca tagctggact tcacaagcag 480
aagactgagc ttttcatggt tcttatcgag aaaaagctgc ttccgcttcg acccggtggt 540
gcaaagttag ttgatcaagc tttaacaaac ggagtcaag tagctgtgtg cagtacttca 600
aatgagaagg cggtttctgc tatagtttca tgcttgcttg gaccagaacg agcagagaaa 660
atcaagatat tcgcaggaga cgtagtcccc aaaaagaaac ctgatccagc catctacaac 720
ttagcagctg aaacccttgg agttgatccc tcaaaatgtg tagtggttga agacagcgcg 780
atcgggctag cagctgcaaa agctgcggga atgacttgta tagttacaaa gaggggatac 840
acggctgatg aagatttcca gaacgcagat gcggttttcg actgcattgg agacctcca 900
gaagagagat ttgatttggc attctgtgga agtcttctcc ggaaacagtt cgttagttaa 960

```

&lt;210&gt; 1660

&lt;211&gt; 319

&lt;212&gt; PR1

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1660

```

Met Ala Thr Val Lys Ile Ser Leu Ser Leu Ala Ser Leu Ser Pro Ser
1      5      10      15

```

```

Ser Ser Ser Ser Ser Ile Gln Ser Lys Leu Ser Pro Ser Phe Ile Pro
20      25      30

```

```

Asn Ala Ala Pro Ala Lys Ala Val Lys Leu Arg Phe Asn Gly Lys Ser
35      40      45

```

```

Leu Arg Ala Lys Pro Met Val Tyr Arg Ser Ser Arg Ser Val Gly Val
50      55      60

```

```

Thr Cys Ser Ala Ser Ser Ser Leu Thr Thr Leu Pro Ser Ala Leu Leu
65      70      75      80

```

```

Phe Asp Cys Asp Gly Val Leu Val Asp Thr Glu Lys Asp Gly His Arg
85      90      95

```

Ile Ser Phe Asn Asp Thr Phe Lys Glu Arg Asp Leu Asn Val Thr Trp  
 100 105 110

Asp Val Asp Leu Tyr Gly Glu Leu Leu Lys Ile Gly Gly Gly Lys Glu  
 115 120 125

Arg Met Thr Ala Tyr Phe Asn Lys Val Gly Trp Pro Glu Lys Ala Pro  
 130 135 140

Lys Asp Glu Ala Glu Arg Lys Glu Phe Ile Ala Gly Leu His Lys Gln  
 145 150 155 160

Lys Thr Glu Leu Phe Met Val Leu Ile Glu Lys Lys Leu Leu Pro Leu  
 165 170 175

Arg Pro Gly Val Ala Lys Leu Val Asp Gln Ala Leu Thr Asn Gly Val  
 180 185 190

Lys Val Ala Val Cys Ser Thr Ser Asn Glu Lys Ala Val Ser Ala Ile  
 195 200 205

Val Ser Cys Leu Leu Gly Pro Glu Arg Ala Glu Lys Ile Lys Ile Phe  
 210 215 220

Ala Gly Asp Val Val Pro Lys Lys Lys Pro Asp Pro Ala Ile Tyr Asn  
 225 230 235 240

Leu Ala Ala Glu Thr Leu Gly Val Asp Pro Ser Lys Cys Val Val Val  
 245 250 255

Glu Asp Ser Ala Ile Gly Leu Ala Ala Ala Lys Ala Ala Gly Met Thr  
 260 265 270

Cys Ile Val Thr Lys Ser Gly Tyr Thr Ala Asp Glu Asp Phe Glu Asn  
 275 280 285

Ala Asp Ala Val Phe Asp Cys Ile Gly Asp Pro Pro Glu Glu Arg Phe  
 290 295 300

Asp Leu Ala Phe Cys Gly Ser Leu Leu Arg Lys Gln Phe Val Ser  
 305 310 315

<210> 1661

<211> 1134

<212> DNA

<213> Arabidopsis thaliana

```

<400> 1661
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gctggttttg ctgggggatg tgcacctaga gctgtgtttc ctagtattgt gggtcgtcct    120
cgtcacaccg gtgtgatggt tgggatgggg caaaaggatg cttatgttgg cgatgaagct    180
caatccaaac gaggtatttt aactctcaag taccctattg agcatggaat tgtcaacaat    240
tgggatgaca tggagaagat ttggcatcac actttctaca atgagctccg tgttgctcct    300
gaggaacatc ctattctact taccgaggca ccgcttaacc cgaaagctaa tcgtgagaag    360
atgactcaaa tcattgttga gactttcaat gcccttgcta tgtatgtggc tattcaggct    420
gttcttttct tttatgccag tggctgtact accggtattg tgctcgactc tggagatggt    480
gtgagccaca ctgttcctat ctatgagggg tatgcacttc cacatgctat cctacgtctt    540
gatcttgctg gtcgtgacct cacggatgcg ctgatgaaga tcctaaccga gcgtgggttac    600
tctttcacca ccacagcaga gcgtgaaatt gtcagagaca taaaggagaa gctttgttac    660
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aactacgagc tacctgatgg gcaagtgatc accattggat cagagcgatt ccgtgtcct    780
gagggtcttt accagccatc tatgattggt atggagaatg ctggtatcca tgaaaccacc    840
tataactcca taatgaagtg tgatgtcgac atcaggaagg acttgtagcg taacattgtg    900
ctcagtgggt gaaccacaat gttccctgga atcgccgaca gaatgagcaa agagatcact    960
gctttggctc caagcagcat gaagatcaaa gtcgttgccc ctccagagag gaaatactct   1020
gtctggattg gagggctcac ctggcctcc ctcagtacct tccagcagat gtggatcgca   1080
aaggcagagt atgacgagtc aggtccatcg attgttcaca ggaagtgcct ctga       1134

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<210> 1662

<211> 377

<212> PRT

<213> *Arabidopsis thaliana*

<400> 1662

Met Ala Asp Gly Glu Asp Ile Gln Pro Leu Val Cys Asp Asn Gly Thr  
1 5 10 15

Gly Met Val Lys Ala Gly Phe Ala Gly Asp Asp Ala Pro Arg Ala Val  
20 25 30

Phe Pro Ser Ile Val Gly Arg Pro Arg His Thr Gly Val Met Val Gly  
 35 40 45  
 Met Gly Gln Lys Asp Ala Tyr Val Gly Asp Glu Ala Gln Ser Lys Arg  
 50 55 60  
 Gly Ile Leu Thr Leu Lys Tyr Pro Ile Glu His Gly Ile Val Asn Asn  
 65 70 75 80  
 Trp Asp Asp Met Glu Lys Ile Trp His His Thr Phe Tyr Asn Glu Leu  
 85 90 95  
 Arg Val Ala Pro Glu Glu His Pro Ile Leu Leu Thr Glu Ala Pro Leu  
 100 105 110  
 Asn Pro Lys Ala Asn Arg Glu Lys Met Thr Gln Ile Met Phe Glu Thr  
 115 120 125  
 Phe Asn Ala Pro Ala Met Tyr Val Ala Ile Gln Ala Val Leu Ser Leu  
 130 135 140  
 Tyr Ala Ser Gly Arg Thr Thr Gly Ile Val Leu Asp Ser Gly Asp Gly  
 145 150 155 160  
 Val Ser His Thr Val Pro Ile Tyr Glu Gly Tyr Ala Leu Pro His Ala  
 165 170 175  
 Ile Leu Arg Leu Asp Leu Ala Gly Arg Asp Leu Thr Asp Ala Leu Met  
 180 185 190  
 Lys Ile Leu Thr Glu Arg Gly Tyr Ser Phe Thr Thr Thr Ala Glu Arg  
 195 200 205  
 Glu Ile Val Arg Asp Ile Lys Glu Lys Leu Cys Tyr Ile Ala Leu Asp  
 210 215 220  
 Tyr Glu Gln Glu Leu Glu Thr Ala Lys Thr Ser Ser Ser Val Glu Lys  
 225 230 235 240  
 Asn Tyr Glu Leu Pro Asp Gly Gln Val Ile Thr Ile Gly Ser Glu Arg  
 245 250 255  
 Phe Arg Cys Pro Glu Val Leu Tyr Gln Pro Ser Met Ile Gly Met Glu  
 260 265 270  
 Asn Ala Gly Ile His Glu Thr Thr Tyr Asn Ser Ile Met Lys Cys Asp  
 275 280 285

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Val Asp Ile Arg Lys Asp Leu Tyr Gly Asn Ile Val Leu Ser Gly Gly  
290 295 300

Thr Thr Met Phe Pro Gly Ile Ala Asp Arg Met Ser Lys Glu Ile Thr  
305 310 315 320

Ala Leu Ala Pro Ser Ser Met Lys Ile Lys Val Val Ala Pro Pro Glu  
325 330 335

Arg Lys Tyr Ser Val Trp Ile Gly Gly Ser Ile Leu Ala Ser Leu Ser  
340 345 350

Thr Phe Gln Gln Met Trp Ile Ala Lys Ala Glu Tyr Asp Glu Ser Gly  
355 360 365

Pro Ser Ile Val His Arg Lys Cys Phe  
370 375

<210> 1663

<211> 351

<212> DNA

<213> Arabidopsis thaliana

<400> 1663  
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aacggtacca tcgccgagtg ctctttatcc acggcggagg aagagttcga gatggactct 180  
gagatcaaca ggcgtatatt agcaacaacg aagtataata gctacggtgc gctgaggaga 240  
aacacagttc cttgctcacg acgcggcgca tcttactaca attgccgacg tggagctcag 300  
gctaatacctt actctcgtgg ctgtagcgct attactcggt gcaggcgata a 351

<210> 1664

<211> 116

<212> PRT

<213> Arabidopsis thaliana

<400> 1664

Met Arg Gly Leu Ser Thr Lys Pro Val Ala Ile Ile Ile Ala Ile Leu  
1 5 10 15

Thr Val His Phe Leu Phe Ala Ala Val Thr Ser Gln Ser Ser Gly Asp  
 20 25 30

Phe Val Pro Ile Glu Ser Lys Cys Asn Gly Thr Ile Ala Glu Cys Ser  
 35 40 45

Leu Ser Thr Ala Glu Glu Glu Phe Glu Met Asp Ser Glu Ile Asn Arg  
 50 55 60

Arg Ile Leu Ala Thr Thr Lys Tyr Ile Ser Tyr Gly Ala Leu Arg Arg  
 65 70 75 80

Asn Thr Val Pro Cys Ser Arg Arg Gly Ala Ser Tyr Tyr Asn Cys Arg  
 85 90 95

Arg Gly Ala Gln Ala Asn Pro Tyr Ser Arg Gly Cys Ser Ala Ile Thr  
 100 105 110

Arg Cys Arg Arg  
 115

<210> 1665

<211> 618

<212> DNA

<213> Arabidopsis thaliana

<400> 1665  
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 gattctggtg ttggtaaaag cagcttgctt ctacagctta tttccagctc tgtcgaagat 120  
 ctgtctccca ccattggtgt tgactttaag atcaaacaga tgaaagtaag agggaaaagg 180  
 ctgaaactta caatctggga cacagctgga caagaaaagt tcagaacatt gacaagttct 240  
 tatttcagag gctcccaagg aatcattctc gtttatgatg tcacgaaaag agagacattt 300  
 ttgaacttgg cagatatatt ggctaaagag attgagctat attcgactaa ccatgactgc 360  
 attaagatgc tcgttggcaa caaagttgat agagaatcag aaaggaaggt tagccgggaa 420  
 gaaggaatgg ctctagcgaa agacctcaat tgtttgtttc atgaatgtag cgcaagaacc 480  
 cgagaaaacg tgaacggatg cttcgaagag ctacgtttga agataatgga ggtacctagt 540  
 cttttggaag aaggatcaag ctctgtgaag agaaaaccgg attaccgagc tcatcaaggc 600  
 cggtgttgca gctcgtga 618

&lt;210&gt; 1666

&lt;211&gt; 205

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1666

Met Gly Ser Ser Ser Gly Gln Ser Gly Tyr Asp Leu Ser Phe Lys Ile  
 1 5 10 15

Leu Leu Ile Gly Asp Ser Gly Val Gly Lys Ser Ser Leu Leu Ser  
 20 25 30

Phe Ile Ser Ser Ser Val Glu Asp Leu Ala Pro Thr Ile Gly Val Asp  
 35 40 45

Phe Lys Ile Lys Gln Met Lys Val Arg Gly Lys Arg Leu Lys Leu Thr  
 50 55 60

Ile Trp Asp Thr Ala Gly Gln Glu Lys Phe Arg Thr Leu Thr Ser Ser  
 65 70 75 80

Tyr Phe Arg Gly Ser Gln Gly Ile Ile Leu Val Tyr Asp Val Thr Lys  
 85 90 95

Arg Glu Thr Phe Leu Asn Leu Ala Asp Ile Trp Ala Lys Glu Ile Glu  
 100 105 110

Leu Tyr Ser Thr Asn His Asp Cys Ile Lys Met Leu Val Gly Asn Lys  
 115 120 125

Val Asp Arg Glu Ser Glu Arg Lys Val Ser Arg Glu Glu Gly Met Ala  
 130 135 140

Leu Ala Lys Asp Leu Asn Cys Leu Phe His Glu Cys Ser Ala Arg Thr  
 145 150 155 160

Arg Glu Asn Val Asn Gly Cys Phe Glu Glu Leu Ala Leu Lys Ile Met  
 165 170 175

Glu Val Pro Ser Leu Leu Glu Glu Gly Ser Ser Ser Val Lys Arg Lys  
 180 185 190

Pro Asp Tyr Arg Ala His Gln Gly Arg Cys Cys Ser Ser  
 195 200 205



&lt;210&gt; 1667

&lt;211&gt; 1434

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1667

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aagaattcag ttaagccgtt tgtttcaggg cagaccttct tcaatgtcga gcttctttca      120
agatcttctc tcaaaggact tctcttccaa gagaagaaac cgagaaaaag ctgcgttttc      180
agagcaactg ctgtacctat aaccacaaca gcaccaccg aaacatctac caataactca      240
tcctctaacc caaagcgtgt tatggtcatt ggtggagatg gttattgcgg ttgggctact      300
gctctccact tgtccaagaa gaattacgaa gtttgcattg ttgacaacct tgtaagacgt      360
cttttcgacc accagcttgg acttgagtca ttgactccta ttgcctccat tcataaccga      420
atcagccgat ggaagcctt gacagggaat tcaattgagt tgtacgttgg tgatatctgt      480
gatttcgaat tcttagctga gtctttcaag tcttttgagc cggattcagt tgtccacttt      540
ggggaacaga gatccgctcc ttactcgatg attgaccggt ccagagcagt ttatacacag      600
cacaacaatg tgattgggac tctcaacgtt ctctttgcta taaaagagtt tggagaggag      660
tgtcatcttg taaaacttgg gacgatgggt gagtatggaa ctccaaatat tgacatcgag      720
gaaggttata taaccataac ccacaacggt agaactgaca ctttgccata cccaagcaa      780
gctagctcct tttatcatct tagcaagtt catgattcgc acaacattgc ttttacttgc      840
aaggcttggg gtattagagc cactgatctc aaccaaggag ttgtttatgg agtgaagact      900
gatgagacag agatgcata ggaactccgt aaccgactgg attacgatgc tgtgtttggt      960
acagcactta accggttctg tgtgcaagct gctgttggtc acccacttac agtttatggt      1020
aaagggtggt agacgagagg ctacctcgat ataagagaca cggttcaatg tgttgagatc      1080
gctatagcaa acccggtcaa agctggtgag ttccgggtct tcaaccaatt tacagaacag      1140
ttttcagtca atgaactggc ttactcgtc actaaagcgg gttcaaaact tgggctagac      1200
gtgaaaaaga tgacggtgcc taaccgaga gtggaggcag aagaacatta ctacaacgca      1260
aagcacacta agctgatgga acttggactt gagcctcact atctatctga ctacttctt      1320
gattcgttgc tcaacttgc ttttcagttt aaagatcgtg tggacacgaa acaaatcatg      1380
cctagtgttt cctggaagaa gattggcgtc aagactaagt ccatgaccac ataa      1434

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&lt;210&gt; 1668

&lt;211&gt; 477

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1668

Met Ala His Leu Leu Ser Ala Ser Cys Pro Ser Val Ile Ser Leu Ser  
1 5 10 15Ser Ser Ser Ser Lys Asn Ser Val Lys Pro Phe Val Ser Gly Gln Thr  
20 25 30Phe Phe Asn Ala Gln Leu Leu Ser Arg Ser Ser Leu Lys Gly Leu Leu  
35 40 45Phe Gln Glu Lys Lys Pro Arg Lys Ser Cys Val Phe Arg Ala Thr Ala  
50 55 60Val Pro Ile Thr Gln Gln Ala Pro Pro Glu Thr Ser Thr Asn Asn Ser  
65 70 75 80Ser Ser Lys Pro Lys Arg Val Met Val Ile Gly Gly Asp Gly Tyr Cys  
85 90 95Gly Trp Ala Thr Ala Leu His Leu Ser Lys Lys Asn Tyr Glu Val Cys  
100 105 110Ile Val Asp Asn Leu Val Arg Arg Leu Phe Asp His Gln Leu Gly Leu  
115 120 125Glu Ser Leu Thr Pro Ile Ala Ser Ile His Asp Arg Ile Ser Arg Trp  
130 135 140Lys Ala Leu Thr Gly Lys Ser Ile Glu Leu Tyr Val Gly Asp Ile Cys  
145 150 155 160Asp Phe Glu Phe Leu Ala Glu Ser Phe Lys Ser Phe Glu Pro Asp Ser  
165 170 175Val Val His Phe Gly Glu Gln Arg Ser Ala Pro Tyr Ser Met Ile Asp  
180 185 190Arg Ser Arg Ala Val Tyr Thr Gln His Asn Asn Val Ile Gly Thr Leu  
195 200 205

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Asn Val Leu Phe Ala Ile Lys Glu Phe Gly Glu Glu Cys His Leu Val  
 210 215 220  
 Lys Leu Gly Thr Met Gly Glu Tyr Gly Thr Pro Asn Ile Asp Ile Glu  
 225 230 235 240  
 Glu Gly Tyr Ile Thr Ile Thr His Asn Gly Arg Thr Asp Thr Leu Pro  
 245 250 255  
 Tyr Pro Lys Gln Ala Ser Ser Phe Tyr His Leu Ser Lys Val His Asp  
 260 265 270  
 Ser His Asn Ile Ala Phe Thr Cys Lys Ala Trp Gly Ile Arg Ala Thr  
 275 280 285  
 Asp Leu Asn Gln Gly Val Val Tyr Gly Val Lys Thr Asp Glu Thr Glu  
 290 295 300  
 Met His Glu Glu Leu Arg Asn Arg Leu Asp Tyr Asp Ala Val Phe Gly  
 305 310 315 320  
 Thr Ala Leu Asn Arg Phe Cys Val Gln Ala Ala Val Gly His Pro Leu  
 325 330 335  
 Thr Val Tyr Gly Lys Gly Gly Gln Thr Arg Gly Tyr Leu Asp Ile Arg  
 340 345 350  
 Asp Thr Val Gln Cys Val Glu Ile Ala Ile Ala Asn Pro Ala Lys Ala  
 355 360 365  
 Gly Glu Phe Arg Val Phe Asn Gln Phe Thr Glu Gln Phe Ser Val Asn  
 370 375 380  
 Glu Leu Ala Ser Leu Val Thr Lys Ala Gly Ser Lys Leu Gly Leu Asp  
 385 390 395 400  
 Val Lys Lys Met Thr Val Pro Asn Pro Arg Val Glu Ala Glu His  
 405 410 415  
 Tyr Tyr Asn Ala Lys His Thr Lys Leu Met Glu Leu Gly Leu Glu Pro  
 420 425 430  
 His Tyr Leu Ser Asp Ser Leu Leu Asp Ser Leu Leu Asn Phe Ala Val  
 435 440 445  
 Gln Phe Lys Asp Arg Val Asp Thr Lys Gln Ile Met Pro Ser Val Ser  
 450 455 460

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Trp Lys Lys Ile Gly Val Lys Thr Lys Ser Met Thr Thr  
465 470 475

<210> 1669

<211> 576

<212> DNA

<213> Arabidopsis thaliana

<400> 1669

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gattataaga	gtcgcggccc	ctccactaac	caaactttgg	cacttatagc	aggagtcccc	180
attggtggca	cactgctaac	cctagctgga	ctcactctag	ccgggtcggg	gatcggcttg	240
ctagtctcca	tacccctctt	cctcctcttc	agtccgggta	tagtcccggc	ggctctcact	300
attgggcttg	ctgtgacggg	aatcttggtc	tctggtttgt	ttgggttgac	gggtctgagc	360
tcggctcgtg	gggtcctcaa	ctacctccgt	gggacgagtg	atacagtccc	agagcaattg	420
gactacgcta	aacggcgtat	ggctgatgcg	gtaggctatg	ctggtatgaa	gggaaaagag	480
atgggtcagt	atgtgcaaga	taaggctcat	gaggctcgtg	agactgagtt	catgactgag	540
acccatgagc	cgggtaaggc	caggagaggc	tcataa			576

<210> 1670

<211> 191

<212> PRT

<213> Arabidopsis thaliana

<400> 1670

Met	Ala	Asn	Val	Asp	Arg	Asp	Arg	Arg	Val	His	Val	Asp	Arg	Thr	Asp
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Lys	Arg	Val	His	Gln	Pro	Asn	Tyr	Glu	Asp	Asp	Val	Gly	Phe	Gly	Gly
			20					25					30		
Tyr	Gly	Gly	Tyr	Gly	Ala	Gly	Ser	Asp	Tyr	Lys	Ser	Arg	Gly	Pro	Ser
		35					40					45			
Thr	Asn	Gln	Ile	Leu	Ala	Leu	Ile	Ala	Gly	Val	Pro	Ile	Gly	Gly	Thr
	50					55					60				

Leu Leu Thr Leu Ala Gly Leu Thr Leu Ala Gly Ser Val Ile Gly Leu  
65 70 75 80

Leu Val Ser Ile Pro Leu Phe Leu Leu Phe Ser Pro Val Ile Val Pro  
85 90 95

Ala Ala Leu Thr Ile Gly Leu Ala Val Thr Gly Ile Leu Ala Ser Gly  
100 105 110

Leu Phe Gly Leu Thr Gly Leu Ser Ser Val Ser Trp Val Leu Asn Tyr  
115 120 125

Leu Arg Gly Thr Ser Asp Thr Val Pro Glu Gln Leu Asp Tyr Ala Lys  
130 135 140

Arg Arg Met Ala Asp Ala Val Gly Tyr Ala Gly Met Lys Gly Lys Glu  
145 150 155 160

Met Gly Gln Tyr Val Gln Asp Lys Ala His Glu Ala Arg Glu Thr Glu  
165 170 175

Phe Met Thr Glu Thr His Glu Pro Gly Lys Ala Arg Arg Gly Ser  
180 185 190

<210> 1671

<211> 1998

<212> DNA

<213> Arabidopsis thaliana

<400> 1671  
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agtccatcgg tcggtccagt gtaccggagt atctatgcta aagacgggtt tcctgaaccg 120  
cctgatgatac tcgtcagtcg atgggatatt ttccgtttat ctgtggagaa atctccaaat 180  
aatccatgac ttggtcgtag agaaatagtt gatggaaaag ctgggaaata tgtatggcaa 240  
acttacaag aagtacataa tgtagtattt aagcttgga actctatcag aactattgga 300  
gttggaaaag gagataaatg cggatattt ggcgccaata gtcctgaatg gattataagc 360  
atggaggctt gcaatgctca tggactctac tgtgtacctt tatatgacac tctagggtgt 420  
ggagcaatag aattcatcat ttgtcatgct gaggtctcac ttgcttttgc tgaggagaac 480  
aagatttctg agttattgaa gacagctcca aatcaacta aatatttgaa gtatattgtg 540

agctttggtg aggttacaaa taatcagaga gtagaagctg agaggcacag attaacaata 600  
 tattcatggg accaattctt gaagctaggg gagggtaaac attatgaatt accagagaag 660  
 aggagaagcg atgtttgcac cataatgtat acaagtgcca caactgggtga tcctaaagga 720  
 gtattgctta caaatgagag cattattcat ctcccttgaag gtgttaaaaa attgcttaaa 780  
 actattgatg aagagttaac cagtaaagat gtatatctct catatctacc tctggctcat 840  
 atcttcgacg gtgtgattga ggagctgtgt atttatgaag cagcctctat cggattctgg 900  
 cgaggggatg ttaagatatt gatagaagac attgctgcat tgaaaccgac tgttttctgc 960  
 gctgttcctc gcgttctaga gagaatatac accggtcttc agcagaaact ttctgatggt 1020  
 ggttttgtaa agaagaaatt attcaacttt gcattcaaat acaaacataa aaacatggag 1080  
 aaagggcagc ctcatgaaca agcatctcca atagctgaca aaattgtatt taaaaaggta 1140  
 aaagaagggg tgggaggaaa cgtgcgtctt atcctctcag gaggcagctcc tcttcagct 1200  
 cacatcgaat ctttcttcg agttgtcgcg tgtgctcatg ttttgcaagg atacggtcta 1260  
 acagagagtt gtgggtggac ttttgtgtcc attccaaacg agctttcaat gcttggaacg 1320  
 gttggtccac cggttccaaa cgttgacata aggctagagt cagttccaga gatgggttat 1380  
 gacgctcttg caagcaatcc acgtggagag atttgcata ggggaaagac tttgttctct 1440  
 ggatactaca aacgtgaaga tctactcaa gaagtcttca ttgatggatg gcttcacact 1500  
 ggtgatgtcg gtgagtggca accagatgga gccatgaaga tcatcgaccg taagaagaac 1560  
 atctttaaac tgtctcaagg agaatacgtt gccgttgaga acttggaaga catatacagt 1620  
 catgtcgccg ccattgaatc gatatgggta tatggaaaca gctatgagtc ttacttagtg 1680  
 gctgtgggat gtccaagcaa gatccagatc gagcattggg ccaaagaaca caaagtttca 1740  
 ggagactttg agtctatctg ccgaaaccaa aagactaaag agtttgtcct tggagagttc 1800  
 aacagagtag ccaaaagaaa aaagctgaag ggatttgagc tgatcaaagg tgttcatttg 1860  
 gacacagtcc cgttcgacat ggaagagatg ctcatcactc cttcttcaaa gatgaaaaga 1920  
 cctcagcttc tcaagtacta tcagaaagag attgatgaaa tgtataagaa aaacagagaa 1980  
 gtgcagctac gagtgtaa 1998

<210> 1672

<211> 665

<212> PRT

<213> Arabidopsis thaliana

<400> 1672

Met Ala Thr Gly Arg Tyr Ile Val Glu Val Glu Lys Gly Lys Gln Gly  
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 20 25 30  
 Ala Lys Asp Gly Phe Pro Glu Pro Pro Asp Asp Leu Val Ser Ala Trp  
 35 40 45  
 Asp Ile Phe Arg Leu Ser Val Glu Lys Ser Pro Asn Asn Pro Met Leu  
 50 55 60  
 Gly Arg Arg Glu Ile Val Asp Gly Lys Ala Gly Lys Tyr Val Trp Gln  
 65 70 75 80  
 Thr Tyr Lys Glu Val His Asn Val Val Ile Lys Leu Gly Asn Ser Ile  
 85 90 95  
 Arg Thr Ile Gly Val Gly Lys Gly Asp Lys Cys Gly Ile Tyr Gly Ala  
 100 105 110  
 Asn Ser Pro Glu Trp Ile Ile Ser Met Glu Ala Cys Asn Ala His Gly  
 115 120 125  
 Leu Tyr Cys Val Pro Leu Tyr Asp Thr Leu Gly Ala Gly Ala Ile Glu  
 130 135 140  
 Phe Ile Ile Cys His Ala Glu Val Ser Leu Ala Phe Ala Glu Glu Asn  
 145 150 155 160  
 Lys Ile Ser Glu Leu Leu Lys Thr Ala Pro Lys Ser Thr Lys Tyr Leu  
 165 170 175  
 Lys Tyr Ile Val Ser Phe Gly Glu Val Thr Asn Asn Gln Arg Val Glu  
 180 185 190  
 Ala Glu Arg His Arg Leu Thr Ile Tyr Ser Trp Asp Gln Phe Leu Lys  
 195 200 205  
 Leu Gly Glu Gly Lys His Tyr Glu Leu Pro Glu Lys Arg Arg Ser Asp  
 210 215 220  
 Val Cys Thr Ile Met Tyr Thr Ser Gly Thr Thr Gly Asp Pro Lys Gly  
 225 230 235 240  
 Val Leu Leu Thr Asn Glu Ser Ile Ile His Leu Leu Glu Gly Val Lys  
 245 250 255

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Lys Leu Leu Lys Thr Ile Asp Glu Glu Leu Thr Ser Lys Asp Val Tyr  
 260 265 270  
 Leu Ser Tyr Leu Pro Leu Ala His Ile Phe Asp Arg Val Ile Glu Glu  
 275 280 285  
 Leu Cys Ile Tyr Glu Ala Ala Ser Ile Gly Phe Trp Arg Gly Asp Val  
 290 295 300  
 Lys Ile Leu Ile Glu Asp Ile Ala Ala Leu Lys Pro Thr Val Phe Cys  
 305 310 315 320  
 Ala Val Pro Arg Val Leu Glu Arg Ile Tyr Thr Gly Leu Gln Gln Lys  
 325 330 335  
 Leu Ser Asp Gly Gly Phe Val Lys Lys Lys Leu Phe Asn Phe Ala Phe  
 340 345 350  
 Lys Tyr Lys His Lys Asn Met Glu Lys Gly Gln Pro His Glu Gln Ala  
 355 360 365  
 Ser Pro Ile Ala Asp Lys Ile Val Phe Lys Lys Val Lys Glu Gly Leu  
 370 375 380  
 Gly Gly Asn Val Arg Leu Ile Leu Ser Gly Ala Ala Pro Leu Ala Ala  
 385 390 395 400  
 His Ile Glu Ser Phe Leu Arg Val Val Ala Cys Ala His Val Leu Gln  
 405 410 415  
 Gly Tyr Gly Leu Thr Glu Ser Cys Gly Gly Thr Phe Val Ser Ile Pro  
 420 425 430  
 Asn Glu Leu Ser Met Leu Gly Thr Val Gly Pro Pro Val Pro Asn Val  
 435 440 445  
 Asp Ile Arg Leu Glu Ser Val Pro Glu Met Gly Tyr Asp Ala Leu Ala  
 450 455 460  
 Ser Asn Pro Arg Gly Glu Ile Cys Ile Arg Gly Lys Thr Leu Phe Ser  
 465 470 475 480  
 Gly Tyr Tyr Lys Arg Glu Asp Leu Thr Gln Glu Val Phe Ile Asp Gly  
 485 490 495  
 Trp Leu His Thr Gly Asp Val Gly Glu Trp Gln Pro Asp Gly Ala Met  
 500 505 510



Lys Ile Ile Asp Arg Lys Lys Asn Ile Phe Lys Leu Ser Gln Gly Glu  
515 520 525

Tyr Val Ala Val Glu Asn Leu Glu Asn Ile Tyr Ser His Val Ala Ala  
530 535 540

Ile Glu Ser Ile Trp Val Tyr Gly Asn Ser Tyr Glu Ser Tyr Leu Val  
545 550 555 560

Ala Val Val Cys Pro Ser Lys Ile Gln Ile Glu His Trp Ala Lys Glu  
565 570 575

His Lys Val Ser Gly Asp Phe Glu Ser Ile Cys Arg Asn Gln Lys Thr  
580 585 590

Lys Glu Phe Val Leu Gly Glu Phe Asn Arg Val Ala Lys Asp Lys Lys  
595 600 605

Leu Lys Gly Phe Glu Leu Ile Lys Gly Val His Leu Asp Thr Val Pro  
610 615 620

Phe Asp Met Glu Arg Asp Leu Ile Thr Pro Ser Tyr Lys Met Lys Arg  
625 630 635 640

Pro Gln Leu Leu Lys Tyr Tyr Gln Lys Glu Ile Asp Glu Met Tyr Lys  
645 650 655

Lys Asn Arg Glu Val Gln Leu Arg Val  
660 665

<210> 1673

<211> 873

<212> DNA

<213> Arabidopsis thaliana

<400> 1673  
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gatccacctg agatttgccg gcttgctcgt ctcaacagga tgttcgctcg cgcttcctca 180  
gctgatttca tttgggaatc aaagttgcct gcgaattatc gtgttattgc acacaagggt 240  
ttctgatgaa ttactctgac gaaattaata aagaaagatc tttatgcaaa gcttagccag 300

cctaattctct tcgacgatgg cacaaaggaa ttgtggatag ataagaacac gggtcgtctt 360  
 tgtttatctta tttcttcaaa ggcactaagg attactggaa ttgatgatcg gagatactgg 420  
 agtcatatcc caactgatga atccaggttc cagtcagctg cttatgttca acagatatgg 480  
 tggtttgaag taggaggaga gtttgagatc cagtttccat ctggaacata tagtctcttc 540  
 ttccgtatcc agctcggtaa aacatcaag aggcctggaa ggaggatctg caactctgaa 600  
 cacattcatg gatgggacat aaaacctgta aggttccagc tcgccacttc ggacaaccaa 660  
 caagctgtat cattgtgtta tctgaacaac aaccctggga gctggagtca ctatcacgtt 720  
 ggagatttca aagtgacaaa tccagatgta tcaacaggaa tcaaattctc catgactcaa 780  
 atcgattgca ctcacagaa aggtgggcta tgcatagact ctgttcttat attacctaaa 840  
 gaatgtgcaa aagaagtcac ttgatcacia tag 873

<210> 1674

<211> 290

<212> PRT

<213> Arabidopsis thaliana

<400> 1674

Met Gly Ala Asn Ile Ser Gly Gly Ser Pro Glu Phe Asp Arg Asn Asp  
 1 5 10 15

Asp Val Tyr Ser Arg Lys Leu Arg Leu Val Asp Leu Pro Glu Asn Cys  
 20 25 30

Val Ala Leu Ile Met Thr Arg Leu Asp Pro Pro Glu Ile Cys Arg Leu  
 35 40 45

Ala Arg Leu Asn Arg Met Phe Arg Arg Ala Ser Ser Ala Asp Phe Ile  
 50 55 60

Trp Glu Ser Lys Leu Pro Ala Asn Tyr Arg Val Ile Ala His Lys Val  
 65 70 75 80

Phe Asp Glu Ile Thr Leu Thr Lys Leu Ile Lys Lys Asp Leu Tyr Ala  
 85 90 95

Lys Leu Ser Gln Pro Asn Leu Phe Asp Asp Gly Thr Lys Glu Leu Trp  
 100 105 110

Ile Asp Lys Asn Thr Gly Arg Leu Cys Leu Ser Ile Ser Ser Lys Ala  
 115 120 125

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Leu Arg Ile Thr Gly Ile Asp Asp Arg Arg Tyr Trp Ser His Ile Pro  
130 135 140

Thr Asp Glu Ser Arg Phe Gln Ser Ala Ala Tyr Val Gln Gln Ile Trp  
145 150 155 160

Trp Phe Glu Val Gly Gly Glu Phe Glu Ile Gln Phe Pro Ser Gly Thr  
165 170 175

Tyr Ser Leu Phe Phe Arg Ile Gln Leu Gly Lys Thr Ser Lys Arg Leu  
180 185 190

Gly Arg Arg Ile Cys Asn Ser Glu His Ile His Gly Trp Asp Ile Lys  
195 200 205

Pro Val Arg Phe Gln Leu Ala Thr Ser Asp Asn Gln Gln Ala Val Ser  
210 215 220

Leu Cys Tyr Leu Asn Asn Asn Pro Gly Ser Trp Ser His Tyr His Val  
225 230 235 240

Gly Asp Phe Lys Val Thr Asn Pro Asp Val Ser Thr Gly Ile Lys Phe  
245 250 255

Ser Met Thr Gln Ile Asp Cys Thr His Thr Lys Gly Gly Leu Cys Ile  
260 265 270

Asp Ser Val Leu Ile Leu Pro Lys Glu Cys Ala Lys Glu Val Ile Gly  
275 280 285

Ser Gln  
290

<210> 1675

<211> 465

<212> DNA

<213> Arabidopsis thaliana

<400> 1675	
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ccattgagtg cggttgatt aagctcaggc cttggaagta gaaggaaatc tcttttgata	180

tgtcactcag ccattaacgc gaaatgcagt gaaggacaaa cacagaccgt tactcgggag 240  
 tcaccgacta taacacaggc tcctgtacac tctaaggaga aatcaccaag cctagacgat 300  
 ggaggagacg ggttcccacc gcgagatgat ggagatggtg gtggaggagg aggggggtgga 360  
 ggcaactggt cgggtgggtt cttcttcttt ggttttctgg ccttcttggg tctattgaag 420  
 gataaagagg gcgaggaaga ttaccgaggg agcagaaggc gataa 465

<210> 1676

<211> 154

<212> PRT

<213> Arabidopsis thaliana

<400> 1676

Met Ala Met Ala Ala Ser Ile Ile Gln Ser Ser Pro Leu Ser Phe Asn  
1 5 10 15

Ser Asn Asn Ala Lys Pro Arg Ile His Ser Ser Gly Ser Leu Gly Gly  
20 25 30

Ile Lys Ser Gln Asn Arg Val Ser Pro Leu Ser Ala Val Gly Leu Ser  
35 40 45

Ser Gly Leu Gly Ser Arg Arg Lys Ser Leu Leu Ile Cys His Ser Ala  
50 55 60

Ile Asn Ala Lys Cys Ser Glu Gly Gln Thr Gln Thr Val Thr Arg Glu  
65 70 75 80

Ser Pro Thr Ile Thr Gln Ala Pro Val His Ser Lys Glu Lys Ser Pro  
85 90 95

Ser Leu Asp Asp Gly Gly Asp Gly Phe Pro Pro Arg Asp Asp Gly Asp  
100 105 110

Gly Gly Gly Gly Gly Gly Gly Gly Asn Trp Ser Gly Gly Phe Phe  
115 120 125

Phe Phe Gly Phe Leu Ala Phe Leu Gly Leu Leu Lys Asp Lys Glu Gly  
130 135 140

Glu Glu Asp Tyr Arg Gly Ser Arg Arg Arg  
145 150

&lt;210&gt; 1677

&lt;211&gt; 378

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1677

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atggcagcga aatttcgaat ttcttcttct tcgttttagcc acagggctag tgattcctca    60
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tcaccattag gattcccaga attcaagctt catgccaaat taggtggagg agatggagaa    180
gtgaagccta aagataagaa aaagtttata accaaagagg aagaacctga acagtattgg    240
caaacggttg gagaaagaga aggagagaat ccgatgaaga cgctcttcc ttacattatc    300
atattcggtg tgtcaactcc attcgtcatc ttagccattg cttttgcaa tggttggatc    360
aaagttccca ttcgttga                                     378

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&lt;210&gt; 1678

&lt;211&gt; 125

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1678

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Met Ala Ala Lys 5 Phe Arg Ile Ser Ser Ser Ser Phe Ser His Arg Ala
1                               10
Ser Asp Ser Ser 20 Thr Ser Ser Ser Ser Ser Tyr Ser Ser Leu Ala
                               25
Leu Pro Gln Phe Phe Cys Pro 35 Pro Ser Pro Leu Gly Phe Pro Glu Phe
                               40
Lys Leu His Ala Lys Leu 50 Gly Gly Asp Gly Glu Val Lys Pro Lys
                               55
Asp Lys Lys Lys Phe 65 Ile Thr Lys Glu Glu Glu Pro Glu Gln Tyr Trp
                               70
Gln Ser Val Gly Glu 85 Arg Glu Gly Glu Asn Pro Met Lys Thr Pro Leu
                               90
Pro Tyr Ile Ile Ile Phe Gly Met Ser Thr Pro Phe Val Ile Leu Ala

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Ile Ala Phe Ala Asn Gly Trp Ile Lys Val Pro Ile Arg  
115 120 125

<210> 1679  
<211> 999  
<212> DNA  
<213> Arabidopsis thaliana

<400> 1679  
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gatccaaga acaaccatct cagagagctt caaggagcca aggaagact cactcttcac 180  
agtgcagatc ttctcgacta cgaagctctc tgtgccacaa tcgacggttg cgatggcggt 240  
ttccacactg cctctccgat gaccgacgat cccgagacaa tgttggagcc ggcggtgaac 300  
ggagccaagt tcgtgattga cgcagcggct aaagccaagg tcaagcgcgt ggttttcacg 360  
tcatcaattg gtgcagttta catgaacctt aaccgtgaca ctcaagccat tgttgacgaa 420  
aactgctgga gtgactttga tttctgcaaa aacactaaga attggtattg ctacgggaag 480  
atgttggcgg aacaatcggc atgggagacg gccaaagcaa aaggtgtgga cttagtggtg 540  
ctaaatccgg ttttggttct cggaccaccg ctccagtcag cgatcaacgc tagtctagtc 600  
catattctca agtacctcac cggctcagcc aagacctacg ctaacttgac tcaggtctac 660  
gtggacgtcc gtgacgtggc actagcccat gttctggtct acgaagcacc ctccgcctca 720  
ggccgttaca tcctcgccga gaccgcactt caccgcggag aggttgttga gattctggcc 780  
aaattcttcc cggagtatcc acttcccacc aagtgttcgg acgagaagaa tccgagggct 840  
aagccataca agttttactc ccaaaagata aaagacttag gcttgaatt taaacctatc 900  
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caagattcga accaaaacga agtcatcatc gaatcttag 999

<210> 1680  
<211> 332  
<212> PRT  
<213> Arabidopsis thaliana

&lt;400&gt; 1680

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 1 5 10 15

Ile Ala Ser Trp Ile Val Lys Leu Leu Leu Glu Arg Gly Tyr Thr Val  
 20 25 30

Arg Gly Thr Val Arg Asn Pro Thr Asp Pro Lys Asn Asn His Leu Arg  
 35 40 45

Glu Leu Gln Gly Ala Lys Glu Arg Leu Thr Leu His Ser Ala Asp Leu  
 50 55 60

Leu Asp Tyr Glu Ala Leu Cys Ala Thr Ile Asp Gly Cys Asp Gly Val  
 65 70 75 80

Phe His Thr Ala Ser Pro Met Thr Asp Asp Pro Glu Thr Met Leu Glu  
 85 90 95

Pro Ala Val Asn Gly Ala Lys Phe Val Ile Asp Ala Ala Ala Lys Ala  
 100 105 110

Lys Val Lys Arg Val Val Phe Thr Ser Ser Ile Gly Ala Val Tyr Met  
 115 120 125

Asn Pro Asn Arg Asp Thr Gln Ala Ile Val Asp Glu Asn Cys Trp Ser  
 130 135 140

Asp Leu Asp Phe Cys Lys Asn Thr Lys Asn Trp Tyr Cys Tyr Gly Lys  
 145 150 155 160

Met Leu Ala Glu Gln Ser Ala Trp Glu Thr Ala Lys Ala Lys Gly Val  
 165 170 175

Asp Leu Val Val Leu Asn Pro Val Leu Val Leu Gly Pro Pro Leu Gln  
 180 185 190

Ser Ala Ile Asn Ala Ser Leu Val His Ile Leu Lys Tyr Leu Thr Gly  
 195 200 205

Ser Ala Lys Thr Tyr Ala Asn Leu Thr Gln Val Tyr Val Asp Val Arg  
 210 215 220

Asp Val Ala Leu Gly His Val Leu Val Tyr Glu Ala Pro Ser Ala Ser  
 225 230 235 240

Gly Arg Tyr Ile Leu Ala Glu Thr Ala Leu His Arg Gly Glu Val Val  
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Glu Ile Leu Ala Lys Phe Phe Pro Glu Tyr Pro Leu Pro Thr Lys Cys  
260 265 270  
Ser Asp Glu Lys Asn Pro Arg Ala Lys Pro Tyr Lys Phe Thr Thr Gln  
275 280 285  
Lys Ile Lys Asp Leu Gly Leu Glu Phe Lys Pro Ile Lys Gln Ser Leu  
290 295 300  
Tyr Glu Ser Val Lys Ser Leu Gln Glu Lys Gly His Leu Pro Leu Pro  
305 310 315 320  
Gln Asp Ser Asn Gln Asn Glu Val Ile Ile Glu Ser  
325 330

<210> 1681

<211> 459

<212> DNA

<213> Arabidopsis thaliana

<400> 1681  
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aaagcgcca aggaagcggc tagtgtctca atgaaaggta cacttgctag gttattcgac 180  
tgctgcagca aagacgtcaa aaagactatt ttgcctctgg gtcacggcga cccctccgct 240  
tacccttgct tccaaacgtc cgttgacgct gaggaagcgg tggttgaatc cttacggctt 300  
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aggactgaag aattgggtga gattctctat cggagtgagg aggtctatgc tggaagatgc 420  
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<210> 1682

<211> 152

<212> PRT

<213> Arabidopsis thaliana

<400> 1682



Met Ser Gln His Met Asn Leu Leu Leu Pro Ser Phe Glu Thr Asp Lys  
 1 5 10 15

Glu Glu Tyr Asp Glu Arg Lys Thr Thr Asp His Gly Gly Ile Gly Gly  
 20 25 30

Ser Val Trp Arg Phe Lys Gly Asn Lys Ala Ala Lys Glu Ala Ala Ser  
 35 40 45

Val Ser Met Lys Gly Thr Leu Ala Arg Leu Phe Asp Cys Cys Ser Lys  
 50 55 60

Asp Val Lys Lys Thr Ile Leu Pro Leu Gly His Gly Asp Pro Ser Val  
 65 70 75 80

Tyr Pro Cys Phe Gln Thr Ser Val Asp Ala Glu Glu Ala Val Val Glu  
 85 90 95

Ser Leu Arg Ser Gly Ala Ala Asn Ser Tyr Ala Pro Gly Val Gly Ile  
 100 105 110

Leu Pro Ala Arg Arg Arg Gly Thr Arg Thr Glu Glu Leu Gly Glu Ile  
 115 120 125

Leu Tyr Arg Ser Gly Glu Val Tyr Ala Gly Arg Cys Ile His Glu Ala  
 130 135 140

Gln Arg Leu Leu Arg Ser Pro Tyr  
 145 150

<210> 1683

<211> 1254

<212> DNA

<213> Arabidopsis thaliana

<400> 1683  
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 cttctccact ttcacactgt ctcttttgct cagacgtctt ttgtgttcgg agatggctct 180  
 tacgagccg gaaacaaaca gtttctctct cagaaccgag ttgacgcaag ctttctctct 240  
 tatggagtca ctgtaggaca agccaccgga cgggtgtccg atggttctat cgttctctgat 300  
 tatcttgcta aattcatggg aattcctaaa atctctccga ttctcctaac cagcgccgat 360

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ttttctcacg gagctaattt cgccatcgcc gacgctaccg ttcttggctc tcctccggag 420
acgatgactt tgtcacaca agtgaagaaa ttctcgaaa acaagaataa gtggacaaat 480
caaacacgtt ctgaagctat ctacttgatc tacattggtt ctgatgatta cttgagctat 540
gctaagagta atccaagtcc atcagatact cagaacaag cttttgttga tcaagtcac 600
actaccataa aagcagaaat aaaggtggtt tacgggtctg gcggaaggaa attcgattc 660
cagaacttgg caccgttagg ttgcttaccg gccgtgaac aagcaagcgg aaatgttcaa 720
gaatgtgtga aattgccttc ggaaatggct gctttgcata acaagaaact ttgcagctc 780
ttggttgaac tatcaagaga actaaatggt ttccagtact cgttttacga cttctttagc 840
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cctgaagagt atatcttctt tgatggtaag catttgacgc aagaagccaa ccttcaggtc 1020
gggcatttga tgtggggagc agatccggaa gtgattggac cgaacaatat cagggagctt 1080
atggctcttc ctctagacat tacagtcac ttacttggtg tacaagaagc tatggctgcc 1140
atgagaccga gacagagcaa cattgagagt ctctatgata tcaagaagat ggagtcagag 1200
atggataatc attggcttta tcaagttgac aaagctatct cttttatgat ataa 1254

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&lt;210&gt; 1684

&lt;211&gt; 417

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1684

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Met Leu Leu Ile Pro Ser Phe Thr Ala Asn Ser Asn Glu Pro Pro Pro
1      5      10

```

```

Ser Lys Leu Ser Leu Ser Asp Leu Ser Met Ala Ile Leu Lys Ser His
20      25      30

```

```

Phe Phe Leu Leu Phe Pro Leu Leu Leu His Phe His Thr Val Ser
35      40      45

```

```

Phe Ala Gln Thr Leu Phe Val Phe Gly Asp Gly Leu Tyr Asp Ala Gly
50      55      60

```

```

Asn Lys Gln Phe Leu Ser Gln Asn Arg Val Asp Ala Ser Phe Pro Pro
65      70      75      80

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Tyr Gly Val Thr Val Gly Gln Ala Thr Gly Arg Trp Ser Asp Gly Ser  
 85 90 95  
 Ile Val Pro Asp Tyr Leu Ala Lys Phe Met Gly Ile Pro Lys Ile Ser  
 100 105 110  
 Pro Ile Leu Leu Thr Thr Ala Asp Phe Ser His Gly Ala Asn Phe Ala  
 115 120 125  
 Ile Ala Asp Ala Thr Val Leu Gly Ser Pro Pro Glu Thr Met Thr Leu  
 130 135 140  
 Ser Gln Gln Val Lys Lys Phe Ser Glu Asn Lys Asn Lys Trp Thr Asn  
 145 150 155 160  
 Gln Thr Arg Ser Glu Ala Ile Tyr Leu Ile Tyr Ile Gly Ser Asp Asp  
 165 170 175  
 Tyr Leu Ser Tyr Ala Lys Ser Asn Pro Ser Pro Ser Asp Thr Gln Lys  
 180 185 190  
 Gln Ala Phe Val Asp Gln Val Ile Thr Thr Ile Lys Ala Glu Ile Lys  
 195 200 205  
 Val Val Tyr Gly Ser Gly Gly Arg Lys Phe Ala Phe Gln Asn Leu Ala  
 210 215 220  
 Pro Leu Gly Cys Leu Pro Ala Val Lys Gln Ala Ser Gly Asn Val Gln  
 225 230 235 240  
 Glu Cys Val Lys Leu Pro Ser Glu Met Ala Ala Leu His Asn Lys Lys  
 245 250 255  
 Leu Leu Gln Leu Leu Val Glu Leu Ser Arg Glu Leu Asn Gly Phe Gln  
 260 265 270  
 Tyr Ser Phe Tyr Asp Phe Phe Ser Ser Ile Gln Asn Arg Val Ile Lys  
 275 280 285  
 Ser Lys Thr Tyr Thr Phe Glu Thr Gly Asn Ala Ala Cys Cys Gly Thr  
 290 295 300  
 Gly Ser Ile Asn Gly Ser Asn Cys Ser Ala Lys Asn Val Cys Ala Lys  
 305 310 315 320  
 Pro Glu Glu Tyr Ile Phe Phe Asp Gly Lys His Leu Thr Gln Glu Ala  
 325 330 335

047-E2F-PCT.ST25.txt

Asn Leu Gln Val Gly His Leu Met Trp Gly Ala Asp Pro Glu Val Ile  
 340 345 350  
 Gly Pro Asn Asn Ile Arg Glu Leu Met Val Leu Pro Leu Asp Ile Thr  
 355 360 365  
 Val Ile Leu Ala Gly Ile Gln Glu Ala Met Ala Ala Met Arg Pro Arg  
 370 375 380  
 Gln Ser Asn Ile Glu Ser Leu Tyr Asp Ile Lys Lys Met Glu Ser Glu  
 385 390 395 400  
 Met Asp Asn His Trp Leu Tyr Gln Val Asp Lys Ala Ile Ser Phe Met  
 405 410 415

Ile

<210> 1685

<211> 1119

<212> DNA

<213> Arabidopsis thaliana

<400> 1685  
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 gatcatgaga tcatcaaacg accaaagaaa cgagcagaga catgggcaca agacgagact 180  
 cgaaccttaa tctcattacg gagagaaatg gacaatcttt tcaacacttc caaatctaac 240  
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 gatcatgatg gtcttctctt cccattgct gctgatccca tcacagcaaa tggagtctct 660  
 ccttgaatt ggagagacac cctggaaat ggcgttgatg gtcagccatt tctgtggagg 720  
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ccagtcctac aagaggagaa gatattctac accgaagaag attaccgaga tttcttggt 1020  
cgacgaggat ggacatgtct gagagagttt gacgcgttc aaaacataga caatatggac 1080  
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<210> 1686

<211> 372

<212> PRT

<213> Arabidopsis thaliana

<400> 1686

Met Phe Val Ser Asp Asn Asn Asn Pro Ser Arg Asp Ile Asn Met Met  
1 5 10 15

Ile Gly Asp Val Thr Ser Asn Gly Asp Leu Gln Pro His Gln Ile Ile  
20 25 30

Leu Gly Glu Ser Ser Gly Gly Glu Asp His Glu Ile Ile Lys Ala Pro  
35 40 45

Lys Lys Arg Ala Glu Thr Trp Ala Gln Asp Glu Thr Arg Thr Leu Ile  
50 55 60

Ser Leu Arg Arg Glu Met Asp Asn Leu Phe Asn Thr Ser Lys Ser Asn  
65 70 75 80

Lys His Leu Trp Glu Gln Ile Ser Lys Lys Met Arg Glu Lys Gly Phe  
85 90 95

Asp Arg Ser Pro Ser Met Cys Thr Asp Lys Trp Arg Asn Ile Leu Lys  
100 105 110

Glu Phe Lys Lys Ala Lys Gln His Glu Asp Lys Ala Thr Ser Gly Gly  
115 120 125

Ser Thr Lys Met Ser Tyr Tyr Asn Glu Ile Glu Asp Ile Phe Arg Glu  
130 135 140

Arg Lys Lys Lys Val Ala Phe Tyr Lys Ser Pro Ala Thr Thr Thr Pro  
145 150 155 160

047-E2F-PCT.ST25.txt

Ser Ser Ala Lys Val Asp Ser Phe Met Gln Phe Thr Asp Lys Gly Phe  
165 170 175

Glu Asp Thr Gly Ile Ser Phe Thr Ser Val Glu Ala Asn Gly Arg Pro  
180 185 190

Thr Leu Asn Leu Glu Thr Glu Leu Asp His Asp Gly Leu Pro Leu Pro  
195 200 205

Ile Ala Ala Asp Pro Ile Thr Ala Asn Gly Val Pro Pro Trp Asn Trp  
210 215 220

Arg Asp Thr Pro Gly Asn Gly Val Asp Gly Gln Pro Phe Ala Gly Arg  
225 230 235 240

Ile Ile Thr Val Lys Phe Gly Asp Tyr Thr Arg Arg Val Gly Ile Asp  
245 250 255

Gly Thr Ala Glu Ala Ile Lys Glu Ala Ile Arg Ser Ala Phe Arg Leu  
260 265 270

Arg Thr Arg Arg Ala Phe Trp Leu Glu Asp Glu Glu Gln Val Ile Arg  
275 280 285

Ser Leu Asp Arg Asp Met Pro Leu Gly Asn Tyr Ile Leu Arg Ile Asp  
290 295 300

Glu Gly Ile Ala Val Arg Val Cys His Tyr Asp Glu Ser Asp Pro Leu  
305 310 315 320

Pro Val His Gln Glu Glu Lys Ile Phe Tyr Thr Glu Glu Asp Tyr Arg  
325 330 335

Asp Phe Leu Ala Arg Arg Gly Trp Thr Cys Leu Arg Glu Phe Asp Ala  
340 345 350

Phe Gln Asn Ile Asp Asn Met Asp Glu Leu Gln Ser Gly Arg Leu Tyr  
355 360 365

Arg Gly Met Arg  
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<210> 1687

<211> 690

<212> DNA

<213> *Arabidopsis thaliana*

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agtgggtgtt tcgtgaatgg aaaattctgc aaagacccaa aatacgtgaa agctgaagac    180
ttttttactt ccggactaaa catcgccgga aacacaataa accgcgttgg ctccaacggt    240
acaaacggtt acgttgacaa aatccctgga ctcaacacct tcggagtgtc tcttgaccga    300
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&lt;210&gt; 1688

&lt;211&gt; 229

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

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<400> 1688
Met Glu Gly Phe Leu Arg Phe Leu Val Ala Lys Ala Ile Leu Leu Ala
1      5      10
Leu Ala Ser Ser Phe Val Ser Cys Tyr Asp Pro Ser Pro Leu Gln Asp
20     25     30
Phe Cys Val Ala Val Asp Asp Ala Ser Gly Val Phe Val Asn Gly Lys
35     40     45
Phe Cys Lys Asp Pro Lys Tyr Val Lys Ala Glu Asp Phe Phe Thr Ser
50     55     60
Gly Leu Asn Ile Ala Gly Asn Thr Ile Asn Arg Val Gly Ser Asn Val
65     70     75     80
Thr Asn Val Asn Val Asp Lys Ile Pro Gly Leu Asn Thr Leu Gly Val

```

Ser Leu Val Arg Ile Asp Phe Ala Pro Gly Gly Gln Asn Pro Pro His  
100 105 110

Thr His Pro Arg Ala Thr Glu Ile Leu Val Val Val Glu Gly Thr Leu  
115 120 125

Leu Val Gly Phe Val Thr Ser Asn Gln Asp Asn Asn Arg Leu Phe Ser  
130 135 140

Lys Val Leu Tyr Pro Gly Asp Val Phe Val Phe Pro Ile Gly Met Ile  
145 150 155 160

His Phe Gln Val Asn Val Gly Arg Thr Asn Ala Val Ala Phe Ala Gly  
165 170 175

Leu Gly Ser Gln Asn Pro Gly Thr Ile Thr Ile Ala Asp Ala Val Phe  
180 185 190

Gly Ser Lys Pro Ser Ile Met Pro Glu Ile Leu Ala Lys Ala Phe Gln  
195 200 205

Leu Asp Val Asn Val Val Lys Tyr Leu Glu Ala Arg Phe Ser Ser Asn  
210 215 220

Tyr Asp Arg His Tyr  
225

<210> 1689

<211> 678

<212> DNA

<213> Arabidopsis thaliana

<400> 1689

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agagtcgaga tggtctctcaa acttaaggc gtaccatagc agtacttgga agaagactta	120
cccaaaaaga gcactttact tcttgaacta aatccgggtc acaagaaggt tccggttctt	180
gttcacaatg ataaattatt atccgagtc catgtgatcc tcgaatacat cgaccaaaact	240
tggaataaca atccaattct acctcacgat ccctacgaga aggccatggt tcggttctgg	300
gccaaagtctg ttgatgagca gatcctacca gttggcttca tgcccctagt aaaagcagag	360
aagggaatag atgttgctat tgaggagatt cgagaaatgc ttatgtttct tgagaaggaa	420



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 agggaatgta tacctccaaa agagaaacat attgagcgta tgaagaaaat tatagagaga 660  
 gctaagtcta cgttctaa 678

<210> 1690

<211> 225

<212> PRT

<213> Arabidopsis thaliana

<400> 1690

Met Ala Lys Lys Glu Glu Ser Val Lys Leu Leu Gly Phe Trp Ile Ser  
 1 5 10 15

Pro Phe Ser Arg Arg Val Glu Met Ala Leu Lys Leu Lys Gly Val Pro  
 20 25 30

Tyr Glu Tyr Leu Glu Glu Asp Leu Pro Lys Lys Ser Thr Leu Leu Leu  
 35 40 45

Glu Leu Asn Pro Val His Lys Lys Val Pro Val Leu Val His Asn Asp  
 50 55 60

Lys Leu Leu Ser Glu Ser His Val Ile Leu Glu Tyr Ile Asp Gln Thr  
 65 70 75 80

Trp Asn Asn Asn Pro Ile Leu Pro His Asp Pro Tyr Glu Lys Ala Met  
 85 90 95

Val Arg Phe Trp Ala Lys Phe Val Asp Glu Gln Ile Leu Pro Val Gly  
 100 105 110

Phe Met Pro Leu Val Lys Ala Glu Lys Gly Ile Asp Val Ala Ile Glu  
 115 120 125

Glu Ile Arg Glu Met Leu Met Phe Leu Glu Lys Glu Val Thr Gly Lys  
 130 135 140

Asp Phe Phe Gly Gly Lys Thr Ile Gly Phe Leu Asp Met Val Ala Gly  
 145 150 155 160

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Ser Met Ile Pro Phe Cys Leu Ala Arg Ala Trp Glu Cys Leu Gly Ile  
165 170 175

Asp Met Thr Pro Glu Asp Thr Phe Pro Glu Leu Asn Arg Trp Ile Lys  
180 185 190

Asn Leu Asn Glu Val Glu Ile Val Arg Glu Cys Ile Pro Pro Lys Glu  
195 200 205

Lys His Ile Glu Arg Met Lys Lys Ile Ile Glu Arg Ala Lys Ser Thr  
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Phe  
225

<210> 1691

<211> 396

<212> DNA

<213> Arabidopsis thaliana

<400> 1691  
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ccttcaccta agaagatgac tgctcctgct cctgcacctg aagtttctcc ttctccttct 180  
ccggcagcgg cattgactcc agaatcctct gcttcaccac catcgccgcc tctagctgat 240  
ttcctaccg ctgactcccc ggctttgtct ccatctgcga tctccgattc tccgactgaa 300  
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<210> 1692

<211> 131

<212> PRT

<213> Arabidopsis thaliana

<400> 1692

Met Ala Phe Ser Lys Ser Leu Val Phe Val Leu Leu Ala Ala Leu Leu  
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20 25 30

Gly Gly Arg Arg Ile Ser Pro Ala Pro Ser Pro Lys Lys Met Thr Ala  
35 40 45

Pro Ala Pro Ala Pro Glu Val Ser Pro Ser Pro Ser Pro Ala Ala Ala  
50 55 60

Leu Thr Pro Glu Ser Ser Ala Ser Pro Pro Ser Pro Pro Leu Ala Asp  
65 70 75 80

Ser Pro Thr Ala Asp Ser Pro Ala Leu Ser Pro Ser Ala Ile Ser Asp  
85 90 95

Ser Pro Thr Glu Ala Pro Gly Pro Ala Gln Gly Gly Ala Val Ser Asn  
100 105 110

Lys Phe Ala Ser Phe Gly Ser Val Ala Val Met Leu Thr Ala Ala Val  
115 120 125

Leu Val Ile  
130

<210> 1693

<211> 1113

<212> DNA

<213> Arabidopsis thaliana

<400> 1693

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cctaaccgag agataccaaa attgccctgag ctacctaata tcgaagtacc caagtgtgccg	180
gagttcccta aaccagagtt gcccaagtta ccgaatttc caaagcctga gttgccaaag	240
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actaaactgc cagatattcc caagcttgaa ttgcccaagt ttccggaaat tccaaaacct	360
gagctcccaa agatgccaga gattccaaaa cctgagttac caaaggtacc ggagattcag	420
aagcccgagt taccaaaaaa gccggagatt ccaaagcctg aattaccaa gttccagag	480
attccaaagc ctgatttgcc aaagtttcca gagaattcaa agcctgaggt gcctaagcta	540
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 ctgccgaaga ttccagaagt tccaaaacct gaactgccca aggttccaga aattacaaaa 1020  
 cctgcagttc cagagattcc aaagccagag ctaccgacga tgcctcaact tcccaagttg 1080  
 ccggaattcc caaaagttcc cggaactcct taa 1113

<210> 1694

<211> 370

<212> PRT

<213> Arabidopsis thaliana

<400> 1694

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Leu Leu Ile Ile Cys Leu Ile Ala Leu Leu Ala Asp Pro Phe Ser Val  
 20 25 30

Gly Ala Arg Arg Leu Leu Glu Asp Pro Lys Pro Glu Ile Pro Lys Leu  
 35 40 45

Pro Glu Leu Pro Lys Phe Glu Val Pro Lys Leu Pro Glu Phe Pro Lys  
 50 55 60

Pro Glu Leu Pro Lys Leu Pro Glu Phe Pro Lys Pro Glu Leu Pro Lys  
 65 70 75 80

Ile Pro Glu Ile Pro Lys Pro Glu Leu Pro Lys Val Pro Glu Ile Pro  
 85 90 95

Lys Pro Glu Glu Thr Lys Leu Pro Asp Ile Pro Lys Leu Glu Leu Pro  
 100 105 110

Lys Phe Pro Glu Ile Pro Lys Pro Glu Leu Pro Lys Met Pro Glu Ile  
 115 120 125

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Pro Lys Pro Glu Leu Pro Lys Val Pro Glu Ile Gln Lys Pro Glu Leu  
130 135 140

Pro Lys Met Pro Glu Ile Pro Lys Pro Glu Leu Pro Lys Phe Pro Glu  
145 150 155 160

Ile Pro Lys Pro Asp Leu Pro Lys Phe Pro Glu Asn Ser Lys Pro Glu  
165 170 175

Val Pro Lys Leu Met Glu Thr Glu Lys Pro Glu Ala Pro Lys Val Pro  
180 185 190

Glu Ile Pro Lys Pro Glu Leu Pro Lys Leu Pro Glu Val Pro Lys Leu  
195 200 205

Glu Ala Pro Lys Val Pro Glu Ile Gln Lys Pro Glu Leu Pro Lys Met  
210 215 220

Pro Glu Leu Pro Lys Met Pro Glu Ile Gln Lys Pro Glu Leu Pro Lys  
225 230 235 240

Leu Pro Glu Val Pro Lys Leu Glu Ala Pro Lys Val Pro Glu Ile Gln  
245 250 255

Lys Pro Glu Leu Pro Lys Met Pro Glu Leu Pro Lys Met Pro Glu Ile  
260 265 270

Gln Lys Pro Glu Leu Pro Lys Met Pro Glu Ile Gln Lys Pro Glu Leu  
275 280 285

Pro Lys Val Pro Glu Val Pro Lys Pro Glu Leu Pro Thr Val Pro Glu  
290 295 300

Val Pro Lys Ser Glu Ala Pro Lys Phe Pro Glu Ile Pro Lys Pro Glu  
305 310 315 320

Leu Pro Lys Ile Pro Glu Val Pro Lys Pro Glu Leu Pro Lys Val Pro  
325 330 335

Glu Ile Thr Lys Pro Ala Val Pro Glu Ile Pro Lys Pro Glu Leu Pro  
340 345 350

Thr Met Pro Gln Leu Pro Lys Leu Pro Glu Phe Pro Lys Val Pro Gly  
355 360 365

Thr Pro  
370

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<210> 1695

<211> 2004

<212> DNA

<213> *Arabidopsis thaliana*

<400> 1695

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ggaaaacccg gaggagatgc tgggttttagg agccgtcgag ctttgctcgg agtaaaggcg	180
gcgacggcgt tagttgagaa ggaggagaag agagaggcgg tgacggagaa gaagaagaaa	240
tcgagggttt tagttgccgg aggtggaatc ggaggattgg tgttgcttt agcgcttaag	300
aagaaaggat tcgatgtgtt agtgtttgag aaagatttga gtgctataag aggagaagga	360
aaatacagag gcccgattca aatacagagc aacgctttag ctgcttgga agctattgat	420
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cgtgcgggtg gagaagatgt gattagaaac gagagtaatg ttgttgattt tgaagattct	660
ggagataaag ttactgtggt actcgagaat ggtcaacgct atgaaggatga tctgcttggt	720
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tattcaggct acacttggtt cacggggatt gcagatttta taccagcgga tatcgagtct	840
gttggtctacc ggggttttctt gggacacaaa cagtactttg tttcttcgga tgttggtggt	900
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tttacttggt gtaaaaggcg tgttacgctg ctcggggatt ctatccatgc gatgcagcca	1140
aatatgggtc aaggtggatg catggccatt gaggatagtt ttcaactagc attggagctt	1200
gatgaagcat ggaacacagag tgttgaaacg actacacctg ttgatgttgt ttctcttttg	1260
aaaagatatg aggaatctag aagactgaga gtcgctatta tccatgcaat ggcgaggatg	1320
gctgcaatta tggcttccac ttacaaagca tacttaggtg ttgggcttgg tcctctgtct	1380
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attgctatgc catcgatgct tgactgggtc cttggaggtg acagtgaata actccaagga	1500
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gattgttgcg tttcggaaac attatgtcta accaaagatg aagatcaacc ttgcatcgtc 1680  
ggaagcgaac cagatcaaga ttttcctgga atgcgcattg tgatcccttc gtctcaggtt 1740  
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<210> 1696

<211> 667

<212> PRT

<213> Arabidopsis thaliana

<400> 1696

Met Gly Ser Thr Pro Phe Cys Tyr Ser Ile Asn Pro Ser Pro Ser Lys  
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Leu Asp Phe Thr Arg Thr His Val Phe Ser Pro Val Ser Lys Gln Phe  
20 25 30

Tyr Leu Asp Leu Ser Ser Phe Ser Gly Lys Pro Gly Gly Val Ser Gly  
35 40 45

Phe Arg Ser Arg Arg Ala Leu Leu Gly Val Lys Ala Ala Thr Ala Leu  
50 55 60

Val Glu Lys Glu Glu Lys Arg Glu Ala Val Thr Glu Lys Lys Lys Lys  
65 70 75 80

Ser Arg Val Leu Val Ala Gly Gly Gly Ile Gly Gly Leu Val Phe Ala  
85 90 95

Leu Ala Ala Lys Lys Lys Gly Phe Asp Val Leu Val Phe Glu Lys Asp  
100 105 110

Leu Ser Ala Ile Arg Gly Glu Gly Lys Tyr Arg Gly Pro Ile Gln Ile  
115 120 125

Gln Ser Asn Ala Leu Ala Ala Leu Glu Ala Ile Asp Ile Glu Val Ala  
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130

135

Glu Gln Val Met Glu Ala Gly Cys Ile Thr Gly Asp Arg Ile Asn Gly  
145 150 155 160

Leu Val Asp Gly Ile Ser Gly Thr Trp Tyr Val Lys Phe Asp Thr Phe  
165 170 175

Thr Pro Ala Ala Ser Arg Gly Leu Pro Val Thr Arg Val Ile Ser Arg  
180 185 190

Met Thr Leu Gln Gln Ile Leu Ala Arg Ala Val Gly Glu Asp Val Ile  
195 200 205

Arg Asn Glu Ser Asn Val Val Asp Phe Glu Asp Ser Gly Asp Lys Val  
210 215 220

Thr Val Val Leu Glu Asn Gly Gln Arg Tyr Glu Gly Asp Leu Leu Val  
225 230 235 240

Gly Ala Asp Gly Ile Trp Ser Lys Val Arg Asn Asn Leu Phe Gly Arg  
245 250 255

Ser Glu Ala Thr Tyr Ser Gly Tyr Thr Cys Tyr Thr Gly Ile Ala Asp  
260 265 270

Phe Ile Pro Ala Asp Ile Glu Ser Val Gly Tyr Arg Val Phe Leu Gly  
275 280 285

His Lys Gln Tyr Phe Val Ser Ser Asp Val Gly Gly Gly Lys Met Gln  
290 295 300

Trp Tyr Ala Phe His Glu Glu Pro Ala Gly Gly Ala Asp Ala Pro Asn  
305 310 315 320

Gly Met Lys Lys Arg Leu Phe Glu Ile Phe Asp Gly Trp Cys Asp Asn  
325 330 335

Val Leu Asp Leu Leu His Ala Thr Glu Glu Glu Ala Ile Leu Arg Arg  
340 345 350

Asp Ile Tyr Asp Arg Ser Pro Gly Phe Thr Trp Gly Lys Gly Arg Val  
355 360 365

Thr Leu Leu Gly Asp Ser Ile His Ala Met Gln Pro Asn Met Gly Gln  
370 375 380



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Gly Gly Cys Met Ala Ile Glu Asp Ser Phe Gln Leu Ala Leu Glu Leu  
 385 390 395 400  
 Asp Glu Ala Trp Lys Gln Ser Val Glu Thr Thr Thr Pro Val Asp Val  
 405 410 415  
 Val Ser Ser Leu Lys Arg Tyr Glu Glu Ser Arg Arg Leu Arg Val Ala  
 420 425 430  
 Ile Ile His Ala Met Ala Arg Met Ala Ala Ile Met Ala Ser Thr Tyr  
 435 440 445  
 Lys Ala Tyr Leu Gly Val Gly Leu Gly Pro Leu Ser Phe Leu Thr Lys  
 450 455 460  
 Phe Arg Val Pro His Pro Gly Arg Val Gly Gly Arg Phe Phe Val Asp  
 465 470 475 480  
 Ile Ala Met Pro Ser Met Leu Asp Trp Val Leu Gly Gly Asn Ser Glu  
 485 490 495  
 Lys Leu Gln Gly Arg Pro Pro Ser Cys Arg Leu Thr Asp Lys Ala Asp  
 500 505 510  
 Asp Arg Leu Arg Glu Trp Phe Glu Asp Asp Asp Ala Leu Glu Arg Thr  
 515 520 525  
 Ile Lys Gly Glu Trp Tyr Leu Ile Pro His Gly Asp Asp Cys Cys Val  
 530 535 540  
 Ser Glu Thr Leu Cys Leu Thr Lys Asp Glu Asp Gln Pro Cys Ile Val  
 545 550 555 560  
 Gly Ser Glu Pro Asp Gln Asp Phe Pro Gly Met Arg Ile Val Ile Pro  
 565 570 575  
 Ser Ser Gln Val Ser Lys Met His Ala Arg Val Ile Tyr Lys Asp Gly  
 580 585 590  
 Ala Phe Phe Leu Met Asp Leu Arg Ser Glu His Gly Thr Tyr Val Thr  
 595 600 605  
 Asp Asn Glu Gly Arg Arg Tyr Arg Ala Thr Pro Asn Phe Pro Ala Arg  
 610 615 620  
 Phe Arg Ser Ser Asp Ile Ile Glu Phe Gly Ser Asp Lys Lys Ala Ala  
 625 630 635 640

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Phe Arg Val Lys Val Ile Arg Lys Thr Pro Lys Ser Thr Arg Lys Asn  
645 650 655

Glu Ser Asn Asn Asp Lys Leu Leu Gln Thr Ala  
660 665

<210> 1697

<211> 438

<212> DNA

<213> Arabidopsis thaliana

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tcaaggctag tagtcagagc ggcggaagat acacctccgg caaccgcctc gtcggatagt 180  
tcttcacca ccgctgctgc tgctccggcg aaagtccgg ccgctaaggc taaacctcct 240  
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aagaacgttg gatcagttgt ggccgttgat caggaccgga agaccgata tccggttggtg 360  
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gtggaagaag taaaatga 438

<210> 1698

<211> 145

<212> PRT

<213> Arabidopsis thaliana

<400> 1698

Met Ala Met Thr Ser Ala Ala Thr Gly Phe Ile Leu Thr Ala Asn Val  
1 5 10 15

Pro Ala Ala Ile Gly Gly Gly Ser Ser Lys Ser Thr Thr Ile Val Ser  
20 25 30

Phe Leu Pro Met Arg Ser Phe Gly Ser Arg Leu Val Val Arg Ala Ala  
35 40 45

Glu Asp Thr Pro Pro Ala Thr Ala Ser Ser Asp Ser Ser Ser Thr Thr  
50 55 60

Ala Ala Ala Ala Pro Ala Lys Val Pro Ala Ala Lys Ala Lys Pro Pro  
65 70 75 80

Pro Ile Gly Pro Lys Arg Gly Ser Lys Val Lys Ile Leu Arg Lys Glu  
85 90 95

Ser Tyr Trp Tyr Lys Asn Val Gly Ser Val Val Ala Val Asp Gln Asp  
100 105 110

Pro Lys Thr Arg Tyr Pro Val Val Arg Phe Ala Lys Val Asn Tyr  
115 120 125

Ala Asn Ile Ser Thr Asn Asn Tyr Ala Leu Asp Glu Val Glu Glu Val  
130 135 140

Lys  
145

<210> 1699

<211> 537

<212> DNA

<213> Arabidopsis thaliana

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tccaagtctt ggtactttcat gaggaactg aagaagggtga agaaaagcaa cggacagatg 180  
cttgccatca atgagatttt cgagaagaac ccaacgacca tcaagaacta cgggatctgg 240  
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ctcaatgggtg gagtggagca gatgtacact gagatggctt ctcgctcatag agtgaggttc 360  
ccttgcatcc agatcatcaa gactgcgact gtccctgcaa agctttgcaa gagagagatc 420  
accaagcagt tccataactc gaagatcaag ttccctcttg ttttcaggaa ggtcagacca 480  
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<210> 1700

<211> 178

<212> PRT

<213> Arabidopsis thaliana

&lt;400&gt; 1700

Met Gly Gly Phe Arg Phe His Gln Tyr Gln Val Val Gly Arg Ala Leu  
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20 25 30Gly Arg Asn Glu Val Cys Ala Lys Ser Lys Phe Trp Tyr Phe Met Arg  
35 40 45Lys Leu Lys Lys Val Lys Lys Ser Asn Gly Gln Met Leu Ala Ile Asn  
50 55 60Glu Ile Phe Glu Lys Asn Pro Thr Thr Ile Lys Asn Tyr Gly Ile Trp  
65 70 75 80Leu Arg Tyr Gln Ser Arg Thr Gly Tyr His Asn Met Tyr Lys Glu Tyr  
85 90 95Arg Asp Thr Thr Leu Asn Gly Gly Val Glu Gln Met Tyr Thr Glu Met  
100 105 110Ala Ser Arg His Arg Val Arg Phe Pro Cys Ile Gln Ile Ile Lys Thr  
115 120 125Ala Thr Val Pro Ala Lys Leu Cys Lys Arg Glu Ile Thr Lys Gln Phe  
130 135 140His Asn Ser Lys Ile Lys Phe Pro Leu Val Phe Arg Lys Val Arg Pro  
145 150 155 160Pro Ser Arg Lys Leu Lys Thr Thr Tyr Lys Ala Ser Lys Pro Asn Leu  
165 170 175

Phe Met

&lt;210&gt; 1701

&lt;211&gt; 681

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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<400> 1701  
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 ggatcgaaa gctaagctgaa ttttccgcat ttgattgggt cttgtaagta tgagccggtt 480  
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 cagaagaggg aaagccacgt ggatgacggc gagtctagtt tggttgtacc ggagttggat 600  
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 tattctgata atcggatata a 681

<210> 1702

<211> 226

<212> PRT

<213> Arabidopsis thaliana

<400> 1702

Met Ser Ser Ser Asp Ser Val Asn Asn Gly Val Asn Ser Arg Met Tyr  
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 20 25 30  
 Asp Leu Pro Leu Ser Val Asp Asp Ser Gln Asp Met Ala Ile Tyr Asn  
 35 40 45  
 Thr Leu Arg Asp Ala Val Ser Ser Gly Trp Thr Pro Ser Val Pro Pro  
 50 55 60  
 Val Thr Ser Pro Ala Glu Glu Asn Lys Pro Pro Ala Thr Lys Ala Ser  
 65 70 75 80  
 Gly Ser His Ala Pro Arg Gln Lys Gly Met Gln Tyr Arg Gly Val Arg  
 85 90 95  
 Arg Arg Pro Trp Gly Lys Phe Ala Ala Glu Ile Arg Asp Pro Lys Lys

Asn Gly Ala Arg Val Trp Leu Gly Thr Tyr Glu Thr Pro Glu Asp Ala  
115 120 125

Ala Val Ala Tyr Asp Arg Ala Ala Phe Gln Leu Arg Gly Ser Lys Ala  
130 135 140

Lys Leu Asn Phe Pro His Leu Ile Gly Ser Cys Lys Tyr Glu Pro Val  
145 150 155 160

Arg Ile Arg Pro Arg Arg Ser Pro Glu Pro Ser Val Ser Asp Gln  
165 170 175

Leu Thr Ser Glu Gln Lys Arg Glu Ser His Val Asp Asp Gly Glu Ser  
180 185 190

Ser Leu Val Val Pro Glu Leu Asp Phe Thr Val Asp Gln Phe Tyr Phe  
195 200 205

Asp Gly Ser Leu Leu Met Asp Gln Ser Glu Cys Ser Tyr Ser Asp Asn  
210 215 220

Arg Ile  
225

<210> 1703

<211> 609

<212> DNA

<213> Arabidopsis thaliana

<400> 1703  
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gatttagccg agaacgggaa gatcgtgctc caaccaaggc ttgcacgct gagatcttat 180  
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gaagctattg gagctgttct cgccgcgatg ggatgcgcgg cgaatgttgc ttggttaacg 480  
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<210> 1704

<211> 202

<212> PRT

<213> Arabidopsis thaliana

<400> 1704

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 20 25 30

Ile Gln Gln Arg Pro Arg Gly Gly Asp Leu Ala Glu Asn Gly Lys Ile  
 35 40 45

Val Leu Gln Pro Arg Leu Cys Thr Leu Arg Ser Tyr Gly Ser Asp Met  
 50 55 60

Val Ile Ala Lys Lys Asp Gly Gly Asp Gly Gly Gly Gly Ser Asp  
 65 70 75 80

Val Glu Leu Ala Ser Pro Phe Phe Glu Thr Leu Thr Asp Tyr Ile Glu  
 85 90 95

Ser Ser Lys Lys Ser Gln Asp Phe Glu Thr Ile Ser Gly Arg Leu Ala  
 100 105 110

Met Ile Val Phe Ala Val Thr Val Thr Glu Glu Ile Val Thr Gly Asn  
 115 120 125

Ser Leu Phe Lys Lys Leu Asp Val Glu Gly Leu Ser Glu Ala Ile Gly  
 130 135 140

Ala Gly Leu Ala Ala Met Gly Cys Ala Ala Met Phe Ala Trp Leu Thr  
 145 150 155 160

Ile Ser Arg Asn Arg Val Gly Arg Ile Phe Thr Val Ser Cys Asn Ser  
 165 170 175

Phe Ile Asp Ser Leu Val Asp Gln Ile Val Asp Gly Leu Phe Tyr Asp  
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Thr Lys Pro Ser Asp Trp Ser Asp Asp Leu  
195 200

<210> 1705  
<211> 990  
<212> DNA  
<213> Arabidopsis thaliana

<400> 1705  
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acacaaaaat ccttcaaaact cgttgccaat tgcctaatac cactaatcct ccactcaaat 180  
atccgccgcc accgcttctt ctgcgccgcc gaaaccgaag ctagtccgc cgatgatgaa 240  
atccaggcat cagtagaaga agaagaagag gtagaagaag aaggagatga aggtgaagaa 300  
gaagtagagg aagaaaaaca gacgacgcaa gcgagtgggtg aagaaggag gctttacgtt 360  
gggaatttac cttacacaat cacttcttct gagctctctc agatttttgg agaagctgga 420  
actgtcgtcg atgttcagat tgtttatgat aaagtactg atagaagcag aggatttgga 480  
tttghtaaca tgggaagcat tgaagaagct aaagaagcga tgcagatgtt taacagctct 540  
caaatgggtg gtagaacggt gaaagtgaac ttcccgaggg tgccgagagg cggtgagaac 600  
gaagtaatga gaacaaaaat ccgtgataat aaccggagtt atgttgatag tcctcataag 660  
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<210> 1706  
<211> 329  
<212> PRT  
<213> Arabidopsis thaliana



&lt;400&gt; 1706

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 20 25 30  
 Asn Ser Gln Leu Phe Tyr Arg Phe Thr Pro Lys Ser Phe Lys Leu Val  
 35 40 45  
 Ala Asn Cys Pro Asn Pro Leu Ile Leu His Ser Asn Ile Arg Arg His  
 50 55 60  
 Arg Phe Phe Cys Ala Ala Glu Thr Glu Ala Ser Ser Ala Asp Asp Glu  
 65 70 75 80  
 Ile Gln Ala Ser Val Glu Glu Glu Glu Glu Val Glu Glu Glu Gly Asp  
 85 90 95  
 Glu Gly Glu Glu Glu Val Glu Glu Glu Lys Gln Thr Thr Gln Ala Ser  
 100 105 110  
 Gly Glu Glu Gly Arg Leu Tyr Val Gly Asn Leu Pro Tyr Thr Ile Thr  
 115 120 125  
 Ser Ser Glu Leu Ser Gln Ile Phe Gly Glu Ala Gly Thr Val Val Asp  
 130 135 140  
 Val Gln Ile Val Tyr Asp Lys Val Thr Asp Arg Ser Arg Gly Phe Gly  
 145 150 155 160  
 Phe Val Thr Met Gly Ser Ile Glu Glu Ala Lys Glu Ala Met Gln Met  
 165 170 175  
 Phe Asn Ser Ser Gln Ile Gly Gly Arg Thr Val Lys Val Asn Phe Pro  
 180 185 190  
 Glu Val Pro Arg Gly Gly Glu Asn Glu Val Met Arg Thr Lys Ile Arg  
 195 200 205  
 Asp Asn Asn Arg Ser Tyr Val Asp Ser Pro His Lys Val Tyr Ala Gly  
 210 215 220  
 Asn Leu Gly Trp Asn Leu Thr Ser Gln Gly Leu Lys Asp Ala Phe Gly  
 225 230 235 240  
 Asp Gln Pro Gly Val Leu Gly Ala Lys Val Ile Tyr Glu Arg Asn Thr  
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Gly Arg Ser Arg Gly Phe Gly Phe Ile Ser Phe Glu Ser Ala Glu Asn  
260 265 270

Val Gln Ser Ala Leu Ala Thr Met Asn Gly Val Glu Val Glu Gly Arg  
275 280 285

Ala Leu Arg Leu Asn Leu Ala Ser Glu Arg Glu Lys Pro Thr Val Ser  
290 295 300

Pro Pro Ser Val Glu Gly Glu Thr Glu Glu Ala Ser Leu Glu Ser  
305 310 315 320

Asn Glu Val Leu Ser Asn Val Ser Ala  
325

<210> 1707

<211> 843

<212> DNA

<213> Arabidopsis thaliana

<400> 1707

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aggattgtgg agcagttgtt gtcccgtggc ttgccgtca aagctggtgt tctgtatgta	240
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gctactgggt ttcgtcccgg atttgatata ttactcctt ggaaagtcga taatttcggg	420
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taa	843

&lt;210&gt; 1708

&lt;211&gt; 280

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1708

Met Ala Thr Ser Leu Leu Leu Arg His Ser Ser Ala Val Phe Phe Ser  
1 5 10 15Gln Ser Ser Phe Phe Thr Lys Asn Lys Ser Phe Arg Ser Phe Thr Ser  
20 25 30Ile Lys Met Glu Lys Gly Glu Ala Glu Asn Ala Val Lys Thr Lys Lys  
35 40 45Val Phe Val Ala Gly Ala Thr Gly Gln Thr Gly Lys Arg Ile Val Glu  
50 55 60Gln Leu Leu Ser Arg Gly Phe Ala Val Lys Ala Gly Val Arg Asp Val  
65 70 75 80Glu Lys Ala Lys Thr Ser Phe Lys Asp Asp Pro Ser Leu Gln Ile Val  
85 90 95Arg Ala Asp Val Thr Glu Gly Pro Asp Lys Leu Ala Glu Val Ile Gly  
100 105 110Asp Asp Ser Gln Ala Val Ile Cys Ala Thr Gly Phe Arg Pro Gly Phe  
115 120 125Asp Ile Phe Thr Pro Trp Lys Val Asp Asn Phe Gly Thr Val Asn Leu  
130 135 140Val Asp Ala Cys Arg Lys Gln Gly Val Glu Lys Phe Val Leu Val Ser  
145 150 155 160Ser Ile Leu Val Asn Gly Ala Ala Met Gly Gln Ile Leu Asn Pro Ala  
165 170 175Tyr Leu Phe Leu Asn Leu Phe Gly Leu Thr Leu Val Ala Lys Leu Gln  
180 185 190Ala Glu Lys Tyr Ile Lys Lys Ser Gly Ile Asn Tyr Thr Ile Val Arg  
Page 2549

195 047-E2F-PCT.ST25.txt  
200 205

Pro Gly Gly Leu Lys Asn Asp Pro Pro Thr Gly Asn Val Val Met Glu  
210 215 220

Pro Glu Asp Thr Leu Tyr Glu Gly Ser Ile Ser Arg Asp Leu Val Ala  
225 230 235 240

Glu Val Ala Val Glu Ala Leu Leu Gln Glu Glu Ser Ser Phe Lys Val  
245 250 255

Val Glu Ile Val Ala Arg Ala Glu Ala Pro Lys Arg Ser Tyr Lys Asp  
260 265 270

Leu Phe Ala Ser Val Lys Gly Gln  
275 280

<210> 1709

<211> 1068

<212> DNA

<213> Arabidopsis thaliana

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<210> 1710

<211> 355

<212> PRT

<213> Arabidopsis thaliana

<400> 1710

Met Leu Lys Val Glu Ser Asn Trp Ala Gln Ala Cys Asp Thr Cys Arg  
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20 25 30

Ser Ser Cys Asp Ala Gln Val His Ala Ala Asn Arg Leu Ala Ser Arg  
35 40 45

His Glu Arg Val Arg Val Cys Gln Ser Cys Glu Arg Ala Pro Ala Ala  
50 55 60

Phe Phe Cys Lys Ala Asp Ala Ala Ser Leu Cys Thr Thr Cys Asp Ser  
65 70 75 80

Glu Ile His Ser Ala Asn Pro Leu Ala Arg Arg His Gln Arg Val Pro  
85 90 95

Ile Leu Pro Ile Ser Glu Tyr Ser Tyr Ser Ser Thr Ala Thr Asn His  
100 105 110

Ser Cys Glu Thr Thr Val Thr Asp Pro Glu Asn Arg Leu Val Leu Gly  
115 120 125

Gln Glu Glu Glu Asp Glu Asp Glu Ala Glu Ala Ala Ser Trp Leu Leu  
130 135 140

Pro Asn Ser Gly Lys Asn Ser Gly Asn Asn Asn Gly Phe Ser Ile Gly  
145 150 155 160

Asp Glu Phe Leu Asn Leu Val Asp Tyr Ser Ser Ser Asp Lys Gln Phe  
165 170 175

047-E2F-PCT.ST25.txt

Thr Asp Gln Ser Asn Gln Tyr Gln Leu Asp Cys Asn Val Pro Gln Arg  
180 185 190

Ser Tyr Gly Glu Asp Gly Val Val Pro Leu Gln Ile Glu Val Ser Lys  
195 200

Gly Met Tyr Gln Glu Gln Gln Asn Phe Gln Leu Ser Ile Asn Cys Gly  
210 215 220

Ser Trp Gly Ala Leu Arg Ser Ser Asn Gly Ser Leu Ser His Met Val  
225 230 235 240

Asn Val Ser Ser Met Asp Leu Gly Val Val Pro Glu Ser Thr Thr Ser  
245 250 255

Asp Ala Thr Val Ser Asn Pro Arg Ser Pro Lys Ala Val Thr Asp Gln  
260 265 270

Pro Pro Tyr Pro Pro Ala Gln Met Leu Ser Pro Arg Asp Arg Glu Ala  
275 280 285

Arg Val Leu Arg Tyr Arg Glu Lys Lys Lys Met Arg Lys Phe Glu Lys  
290 295 300

Thr Ile Arg Tyr Ala Ser Arg Lys Ala Tyr Ala Glu Lys Arg Pro Arg  
305 310 315 320

Ile Lys Gly Arg Phe Ala Lys Lys Lys Asp Val Asp Glu Glu Ala Asn  
325 330 335

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Pro Ser Phe  
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<210> 1711

<211> 1956

<212> DNA

<213> Arabidopsis thaliana

<400> 1711  
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<210> 1712

<211> 651

<212> PRT

<213> Arabidopsis thaliana

<400> 1712

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20 25 30

Phe Gly Asp Val Phe Gly Gly Pro Pro Lys Arg Arg Ser Lys Val Thr  
35 40 45

Ser Asn Glu Val Thr Arg His Ser Phe Ser Glu Ser Ala Leu Arg Arg  
50 55 60

Arg Asp Val Ile Val Asp Val Gly Asp Leu Leu Pro Gln Asp Glu Lys  
65 70 75 80

Pro Val Phe Gly Glu Asp Thr Ser Ser Val Arg Arg Arg Phe Thr Thr  
85 90 95

Asp Asp Phe Phe Asp Asp Ile Phe Arg Val Asn Glu Ser Ser Ser Leu  
100 105 110

Pro Gly Ser Arg Ile Leu Ser Pro Ala His Lys Pro Glu Ser Ser Ser  
115 120 125

Gly Thr Ser Ser Pro Ser Gln Phe Ser Leu Pro Ala Lys Ala Thr Glu  
130 135 140

Ile Pro Thr Phe Asn Leu Ala Ala Thr Arg Ser Leu Asn Lys Asn Lys  
145 150 155 160

Glu Thr Val Ser Ser Ser Pro Leu Ser Arg Thr Ser Ser Lys Ala Asp  
165 170 175

Val Val Ser Thr Ala Lys Ser Tyr Ser Asp Asp Cys Asp Asp Pro Pro  
180 185 190

Gln Val Phe Val Thr Gly Lys Gly Arg Gln Phe His Phe Ser Ile Tyr  
195 200 205



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Lys Trp Pro Asn Lys Gly Val Pro Val Val Ile Trp Gly Ser Ser Arg  
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 260 265 270  
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 275 280 285  
 Asp Leu Lys Ser Glu Gln Ala Phe Phe Gly Val Ser Lys Ala Arg Glu  
 290 295 300  
 Ala Asn Val Lys Pro Leu Asp Ser Val Glu Ser Glu Gln Ala Phe Ser  
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 Gly Val Ser Lys Ala His Glu Ala Thr Thr Val Lys Pro Leu His Ser  
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 Arg Glu Val Arg Lys Gly Lys Ser Lys Ala Lys Asn Thr Arg Ser Phe  
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 385 390 395 400  
 Ala Ala Pro Glu Val Gly Lys Asp Gly Val Lys Gly Lys Val Ser Asp  
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 420 425 430  
 Ser Leu Gly Gln Ser Ser Arg Trp Arg Ala Lys Glu Thr Pro Lys Thr  
 435 440 445  
 Asp Ile Ile His Asp Gly Ser Asn Ala Lys Glu Thr Val Asn Ile Pro  
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450

455

Asp Gln Gln Lys Lys Ser Thr Pro Asp Ile Pro Ala Met Asn Arg Asp  
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Gln Lys Pro Ser Gln Ser Thr Gln Lys Lys Asp Ser Asp Arg Glu Ser  
485 490 495

Met Asn Tyr Lys Ala Pro Gly Asp Thr Val Gln Glu Glu Arg Gln Glu  
500 505 510

Pro Ser Thr Thr His Thr Thr Ser Glu Asp Ile Asp Glu Pro Phe His  
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Val Asn Phe Asp Val Glu Asp Ile Thr Gln Asp Glu Asn Lys Met Glu  
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Glu Ala Asn Lys Asp Ala Glu Glu Ile Lys Asn Ile Asp Ala Lys Ile  
545 550 555 560

Arg Lys Trp Ser Ser Gly Lys Ser Gly Asn Ile Arg Ser Leu Leu Ser  
565 570 575

Thr Leu Gln Tyr Ile Leu Trp Ser Gly Ser Gly Trp Lys Pro Val Pro  
580 585 590

Leu Met Asp Met Ile Glu Gly Asn Ala Val Arg Lys Ser Tyr Gln Arg  
595 600 605

Ala Leu Leu Ile Leu His Pro Asp Lys Leu Gln Gln Lys Gly Ala Ser  
610 615 620

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645 650

<210> 1713

<211> 2130

<212> DNA

<213> Arabidopsis thaliana

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047-E2F-PCT.ST25.txt

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&lt;210&gt; 1714

&lt;211&gt; 709

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1714

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20      25      30

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Ile Arg Ser Glu Gly Leu Ile Thr Ile Gly Lys Ser Val Thr Arg Ala
35      40      45

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Val Phe Pro Glu Asp Leu Arg Ile Thr Glu Lys Lys Ile Phe Asp Pro
50      55      60

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Gln Asp Lys Thr Leu Leu Val Trp Asn Arg Leu Phe Val Ile Ser Cys
65      70      75      80

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Ile Leu Ala Val Ser Val Asp Pro Leu Phe Phe Tyr Leu Pro Ile Val
85      90      95

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Asp Asn Ser Gly Ser Ser Cys Ile Gly Ile Asp Thr Lys Leu Ala Val
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Thr Thr Thr Thr Leu Arg Thr Ile Val Asp Val Phe Tyr Leu Thr Arg
115     120     125

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Met Ala Leu Gln Phe Arg Thr Ala Tyr Ile Ala Pro Ser Ser Arg Val
130     135     140

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Phe Gly Arg Gly Glu Leu Val Ile Asp Pro Ala Lys Ile Ala Glu Arg
145     150     155     160

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Tyr Leu Thr Arg Tyr Phe Val Val Asp Phe Leu Ala Val Leu Pro Leu
165     170     175

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Pro Gln Ile Ala Val Trp Lys Phe Leu His Gly Ser Lys Gly Ser Asp  
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Val Leu Pro Thr Lys Thr Ala Leu Leu Asn Ile Val Ile Val Gln Tyr  
195 200 205

Ile Pro Arg Phe Val Arg Phe Ile Pro Leu Thr Ser Glu Leu Lys Lys  
210 215 220

Thr Ala Gly Ala Phe Ala Glu Gly Ala Trp Ala Gly Ala Ala Tyr Tyr  
225 230 235 240

Leu Leu Trp Tyr Met Leu Ala Ser His Ile Thr Gly Ala Phe Trp Tyr  
245 250 255

Met Leu Ser Val Glu Arg Asn Asp Thr Cys Trp Arg Phe Ala Cys Lys  
260 265 270

Val Gln Pro Asp Pro Arg Leu Cys Val Gln Ile Leu Tyr Cys Gly Thr  
275 280 285

Lys Phe Val Ser Ser Gly Glu Thr Glu Trp Ile Lys Thr Val Pro Glu  
290 295 300

Leu Leu Lys Ser Asn Cys Ser Ala Lys Ala Asp Asp Ser Lys Phe Asn  
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Tyr Gly Ile Tyr Gly Gln Ala Ile Ser Ser Gly Ile Val Ser Ser Thr  
325 330 335

Thr Phe Phe Ser Lys Phe Cys Tyr Cys Leu Trp Trp Gly Leu Gln Asn  
340 345 350

Leu Ser Thr Leu Gly Gln Gly Leu Gln Thr Ser Thr Phe Pro Gly Glu  
355 360 365

Val Leu Phe Ser Ile Ala Ile Ala Ile Ala Gly Leu Leu Phe Ala  
370 375 380

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Leu Glu Glu Met Arg Ile Lys Arg Arg Asp Ser Glu Gln Trp Met His  
405 410 415

His Arg Ser Leu Pro Gln Asn Leu Arg Glu Arg Val Arg Arg Tyr Asp  
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Gln Tyr Lys Trp Leu Glu Thr Arg Gly Val Asp Glu Glu Asn Ile Val  
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 Ser Thr Tyr Ile Val Arg Glu Gly Asp Pro Val Asn Glu Met Met Phe  
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 515 520 525  
 Gly Phe Phe Asn Arg Gly Leu Leu Lys Glu Gly Asp Phe Cys Gly Glu  
 530 535 540  
 Glu Leu Leu Thr Trp Ala Leu Asp Pro Lys Ala Gly Ser Asn Leu Pro  
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 Ser Ser Thr Arg Thr Val Lys Ala Leu Thr Glu Val Glu Ala Phe Ala  
 565 570 575  
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 580 585 590  
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 Arg Thr Trp Ala Ser Cys Phe Ile Gln Ala Ala Trp Arg Arg Tyr Ser  
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 645 650 655  
 Val Ile Thr Arg Ser Glu Ser Ser Ser Arg Leu Arg Ser Thr Ile Phe  
 660 665 670

Ala Ser Arg Phe Ala Ala Asn Ala Leu Lys Gly His Arg Leu Arg Ser  
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Asp Phe Asp Ala Glu  
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<211> 999

<212> DNA

<213> *Arabidopsis thaliana*

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 aacaagaaag atagtaatgg tgtaaggaa gctctcgata aattgagtga agaaggttg 240  
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 cccggggact ggggattctt tgtgccttac ttagttggga gcatttcggt ggtagtttta 480  
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<210> 1716

<211> 332

<212> PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1716

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35 40 45Ser Gly Phe Asp Leu Ser Ser Leu Glu Ser Ala Ile Asn Lys Lys Asp  
50 55 60Ser Asn Gly Val Lys Glu Ala Leu Asp Lys Leu Ser Glu Glu Gly Trp  
65 70 75 80Ala Lys Lys Trp Ser Ser Gln Pro Tyr Leu Ser Arg Arg Thr Thr Ser  
85 90 95Leu Arg Glu Leu Thr Thr Leu Gly Ile Lys Asn Ala Glu Thr Leu Ala  
100 105 110Ile Pro Ser Val Arg Asn Asp Ala Ala Phe Leu Phe Thr Val Val Gly  
115 120 125Ser Thr Gly Phe Ile Ala Val Leu Ala Gly Gln Leu Pro Gly Asp Trp  
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165 170 175Phe Ser Thr Phe Phe Pro Asp Tyr Gln Glu Arg Ile Ala Ala His Glu  
180 185 190Ala Ala His Phe Leu Val Ala Tyr Leu Ile Gly Leu Pro Ile Leu Gly  
195 200 205Tyr Ser Leu Asp Ile Gly Lys Glu His Val Asn Leu Ile Asp Glu Arg  
210 215 220



Leu Ala Lys Leu Ile Tyr Ser Gly Lys Leu Asp Ser Lys Glu Leu Asp  
 225 230 235 240

Arg Leu Ala Ala Val Ala Met Ala Gly Leu Ala Ala Glu Gly Leu Lys  
 245 250 255

Tyr Asp Lys Val Ile Gly Gln Ser Ala Asp Leu Phe Ser Leu Gln Arg  
 260 265 270

Phe Ile Asn Arg Ser Gln Pro Lys Ile Ser Asn Glu Gln Gln Gln Asn  
 275 280 285

Leu Thr Arg Trp Ala Val Leu Tyr Ser Ala Ser Leu Leu Lys Asn Asn  
 290 295 300

Lys Thr Ile His Glu Ala Leu Met Ala Ala Met Ser Lys Asn Ala Ser  
 305 310 315 320

Val Leu Glu Cys Ile Gln Thr Ile Glu Thr Ala Ser  
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<210> 1717

<211> 1254

<212> DNA

<213> Arabidopsis thaliana

<400> 1717

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tcccaagtgt taaaaaaga aggtgagaag caagtgatgc cgaggaggaa aagtagtaac	300
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<210> 1718

<211> 417

<212> PRT

<213> Arabidopsis thaliana

<400> 1718

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His His Pro Leu Ala Ala Asn Lys Gly Ser Ser Ile Glu Glu Leu Lys  
 35 40 45

Gln Gly Leu Cys Cys Thr Lys Thr Val Thr Phe Val Ser Ser Arg Arg  
 50 55 60

Cys Ser Thr Leu Cys Phe Val Gly Lys Ser Gln Asp Thr Glu Thr Asn  
 65 70 75 80

Ser Gln Val Val Gln Lys Glu Gly Glu Lys Gln Val Met Pro Arg Arg  
 85 90 95

Lys Ser Ser Asn Ser Ser Gln Leu Leu Val Glu Tyr Val Ser Asn Asp  
 100 105 110

Ala Lys Phe Val Asn Glu Arg Ala Arg Asn Asp Phe Val Leu Leu Ser  
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Arg Gly Ile Met Arg Leu Asp Ala Arg Ala Arg Gln Asp Val Ala Ile  
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Glu Lys Ile Asp Arg Asp Val Lys Arg Lys Ala Glu Arg Leu His His  
165 170 175

Ile Ala Thr Ile Phe Lys Asn Ile Ala Glu Ser Lys Leu Lys Asn Ala  
180 185 190

Ala Asp Lys His Trp Ser Asp Gly Ala Leu Glu Ala Asp Leu Arg Arg  
195 200 205

Ala Asp Phe Arg Ala Lys Gln Arg Ala Met Glu Asp Ala Leu Met Ala  
210 215 220

Leu Glu Phe Ile Lys Asn Ile His Asp Met Met Val Asn Lys Met Val  
225 230 235 240

Asp Ser Leu Val Thr Ser Glu Thr Gly Thr Thr Asp Arg Ile Ser Leu  
245 250 255

Glu Lys Asn Gly Ile Ala Leu Gly Phe Phe Pro Gly Glu Val Ser Ser  
260 265 270

Asp Arg Ile Ser Ala Ile Glu Glu Ala Tyr Lys Ser Met Ala Ser Ala  
275 280 285

Leu Ser Glu Ala Asp Gly Ile Asp Tyr Thr Asp Pro Glu Glu Leu Glu  
290 295 300

Leu Leu Val Thr Thr Leu Ile Asp Leu Asp Ala Met Asp Gly Lys Ser  
305 310 315 320

Ser Ala Ser Leu Leu Ala Glu Cys Ser Ser Ser Pro Asp Val Asn Thr  
325 330 335

Arg Lys Ala Leu Ala Asn Ala Leu Ala Ala Ala Pro Ser Met Trp Thr  
340 345 350

Leu Gly Asn Ala Gly Met Gly Ala Leu Gln Arg Leu Ala Glu Asp Ser  
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Asn Pro Ala Ile Ala Ala Ala Ala Ser Arg Ala Ile Asn Ala Leu Lys  
370 375 380

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Lys Gln Trp Glu Val Glu Glu Gly Asp Ser Leu Arg Phe Met Met Asn  
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Phe Glu Arg Pro Asn Asp Asp Asp Val Asp Ser Asp Leu Asp Glu  
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Ile

<210> 1719

<211> 2292

<212> DNA

<213> Arabidopsis thaliana

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<210> 1720

<211> 763

<212> PRT

<213> Arabidopsis thaliana

<400> 1720

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35 40 45

047-E2F-PCT.ST25.txt

Pro Asp Asn Met Glu Ile Asp Ala Gln Ile Lys Lys Asp Asp Glu Lys  
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Ala Glu Thr Glu Asp Lys Glu Ser Glu Val Lys Lys Asn Glu Asp Asn  
65 70 75 80

Ala Glu Thr Gln Lys Met Glu Glu Lys Val Glu Val Thr Lys Asp Glu  
85 90 95

Gly Gln Ala Glu Ala Thr Asn Met Asp Glu Asp Ala Asp Gly Lys Lys  
100 105 110

Glu Gln Thr Asp Asp Gly Val Ser Val Glu Asp Thr Val Met Lys Glu  
115 120 125

Asn Val Glu Ser Lys Asp Asn Asn Tyr Ala Lys Asp Asp Glu Lys Glu  
130 135 140

Thr Lys Glu Thr Asp Ile Thr Glu Ala Asp His Lys Lys Ala Gly Lys  
145 150 155 160

Glu Asp Ile Gln His Glu Ala Asp Lys Ala Asn Gly Thr Lys Asp Gly  
165 170 175

Asn Thr Gly Asp Ile Lys Glu Glu Gly Thr Leu Val Asp Glu Asp Lys  
180 185 190

Gly Thr Asp Met Asp Glu Lys Val Glu Asn Gly Asp Glu Asn Lys Gln  
195 200 205

Val Glu Asn Val Glu Gly Lys Glu Lys Glu Asp Lys Glu Glu Asn Lys  
210 215 220

Thr Lys Glu Val Glu Ala Ala Lys Ala Glu Val Asp Glu Ser Lys Val  
225 230 235 240

Glu Asp Glu Lys Glu Gly Ser Glu Asp Glu Asn Asp Asn Glu Lys Val  
245 250 255

Glu Ser Lys Asp Ala Lys Glu Asp Glu Lys Glu Glu Thr Asn Asp Asp  
260 265 270

Lys Glu Asp Glu Lys Glu Glu Ser Lys Gly Ser Lys Lys Arg Gly Lys  
275 280 285

Gly Thr Ser Ser Gly Gly Lys Val Arg Glu Lys Asn Lys Thr Glu Glu  
290 295 300

047-E2F-PCT.ST25.txt

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 325 330 335  
 Ser Ser Lys Glu Phe Arg Val Glu Lys Gly Arg Gly Ala Tyr Leu Lys  
 340 345 350  
 Asp Ile Pro Asn Val Ala Asn Lys Val Met Arg Lys Arg Ser Asp Glu  
 355 360 365  
 Thr Leu Lys Leu Leu His Pro Ile Leu Phe Gly Gly Arg Arg Gly Lys  
 370 375 380  
 Ala Ala Gln Ile Lys Thr Asn Ile Leu Gly Phe Ser Gly Phe Val Trp  
 385 390 395 400  
 His Gly Asp Glu Lys Lys Ala Lys Glu Lys Val Lys Glu Lys Leu Glu  
 405 410 415  
 Lys Cys Thr Lys Glu Lys Leu Trp Glu Phe Cys Asp Val Leu Asp Ile  
 420 425 430  
 His Ile Thr Lys Ala Thr Thr Lys Lys Glu Asp Ile Ile Thr Lys Leu  
 435 440 445  
 Phe Glu Phe Leu Glu Lys Pro His Val Thr Gly Asp Val Thr Gly Asp  
 450 455 460  
 Thr Thr Val Ser Glu Lys Glu Lys Ser Ser Lys Gly Ala Lys Arg Lys  
 465 470 475 480  
 Arg Thr Pro Lys Lys Thr Ser Pro Thr Ala Gly Ser Ser Ser Ser Lys  
 485 490 495  
 Arg Ser Ala Lys Ser Gln Lys Lys Ser Glu Glu Ala Thr Lys Val Val  
 500 505 510  
 Lys Lys Ser Leu Ala His Ser Asp Asp Glu Ser Glu Glu Glu Lys Glu  
 515 520 525  
 Glu Glu Glu Lys Gln Glu Glu Glu Lys Ala Glu Glu Lys Glu Glu Lys  
 530 535 540  
 Lys Glu Glu Glu Asn Glu Asn Gly Ile Pro Asp Lys Ser Glu Asp Glu  
 545 550 555 560 565 570 575 580 585 590 595 600  
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545                      550                      560

Ala Pro Gln Pro Ser Glu Ser Glu Glu Lys Asp Glu Ser Glu Glu His  
565                      570                      575

Ser Glu Glu Glu Thr Thr Lys Lys Lys Arg Gly Ser Arg Leu Ser Ala  
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Gly Lys Lys Glu Ser Ala Gly Arg Ala Arg Asn Lys Lys Ala Val Val  
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Ala Ala Lys Ser Ser Pro Pro Glu Lys Ile Thr Gln Lys Arg Ser Ser  
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Ala Lys Arg Lys Lys Thr Asp Asp Asp Ser Asp Thr Ser Pro Lys Ala  
625                      630                      635

Ser Ser Lys Arg Lys Lys Ser Glu Asn Pro Ile Lys Ala Ser Pro Ala  
645                      650                      655

Pro Ser Lys Ser Ala Ser Lys Glu Lys Pro Val Lys Arg Ala Gly Lys  
660                      665                      670

Gly Lys Asp Lys Pro Ser Asp Lys Val Leu Lys Asn Ala Ile Val Glu  
675                      680                      685

Ile Leu Lys Arg Val Asp Phe Ser Thr Ala Thr Phe Thr Asp Ile Leu  
690                      695                      700

Lys Glu Leu Ala Lys Glu Phe Thr Glu Asp Leu Thr Pro Arg Lys Ser  
705                      710                      715                      720

Ser Ile Lys Met Ile Ile Gln Glu Glu Leu Thr Lys Leu Ala Asp Glu  
725                      730                      735

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<211> 525

<212> DNA

<213> Arabidopsis thaliana



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 aaggaccata aaaacccgag aaagaagtac cgggatcagc acaagaaaat agtcattaac 420  
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<210> 1722

<211> 174

<212> PRT

<213> Arabidopsis thaliana

<400> 1722

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Arg Ala Ala Leu Glu Gly Lys His Arg Ser Asn Gly Ser Thr Val Leu  
 35 40 45

Lys Ser Ala Lys Ala Gln Lys Arg Gln Lys Ser Glu Asp Ser Glu Asp  
 50 55 60

Glu Phe Tyr Arg Gln Val Lys Gln Lys Gln Glu Ala Lys Lys Ala Ala  
 65 70 75 80

Lys Ala Glu Ile Tyr Ser Arg Lys Pro Tyr Leu Ile Pro Ser Ser Pro  
 85 90 95

Asp Leu Val Asp Gly Arg Arg Leu Ile Ser Asn Gln Met Ala Ser Asn  
 100 105 110

Arg Gly Leu Thr Arg Lys Arg Asn Lys Asp His Lys Asn Pro Arg Lys  
 Page 2571

115 120 047-E2F-PCT.ST25.txt 125  
 Lys Tyr Arg Asp Gln His Lys Lys Ile Val Ile Asn Arg Lys Gly Gln  
 130 135 140

Val Arg Asp Ile Arg Thr Gln Val Gly Pro Tyr Ala Gly Glu Thr Arg  
 145 150 155 160

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 165 170

<210> 1723

<211> 981

<212> DNA

<213> Arabidopsis thaliana

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<210> 1724

&lt;211&gt; 326

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1724

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Pro Cys Leu Ser His Gly Thr Gly Gly Asp His Asp Asp Asp Glu Ala  
 20 25 30

Ser His Val Lys Ser Ser Asp Leu Lys Ser Lys Ser Leu Ile Ser Val  
 35 40 45

Lys Ile Ala Cys Leu Val Ile Ile Phe Val Leu Thr Phe Ile Ser Gly  
 50 55 60

Val Ser Pro Tyr Phe Leu Lys Trp Ser Gln Gly Phe Leu Val Leu Gly  
 65 70 75 80

Thr Gln Phe Ala Gly Gly Val Phe Leu Ala Thr Ala Leu Met His Phe  
 85 90 95

Leu Ser Asp Ala Asp Glu Thr Phe Arg Gly Leu Leu Thr Ala Glu Gly  
 100 105 110

Glu Ser Glu Pro Ser Pro Ala Tyr Pro Phe Ala Tyr Met Leu Ala Cys  
 115 120 125

Ala Gly Phe Met Leu Thr Met Leu Ala Asp Ser Val Ile Ala His Ile  
 130 135 140

Tyr Ser Lys Thr Gln Asn Asp Leu Glu Leu Gln Gly Glu Asp Lys Ser  
 145 150 155 160

Asn Gln Arg Ser Ala Thr Thr Glu Thr Ser Ile Gly Asp Ser Ile Leu  
 165 170 175

Leu Ile Val Ala Leu Cys Phe His Ser Val Phe Glu Gly Ile Ala Ile  
 180 185 190

Gly Ile Ser Glu Thr Lys Ser Asp Ala Trp Arg Ala Leu Trp Thr Ile  
 195 200 205

Thr Leu His Lys Ile Phe Ala Ala Ile Ala Met Gly Ile Ala Leu Leu  
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210

215

Arg Met Ile Pro Asp Arg Pro Leu Phe Ser Ser Ile Thr Tyr Ser Phe  
225 230 235 240

Ala Phe Ala Ile Ser Ser Pro Ile Gly Val Ala Ile Gly Ile Val Ile  
245 250 255

Asp Ala Thr Thr Gln Gly Ser Ile Ala Asp Trp Ile Phe Ala Leu Ser  
260 265 270

Met Ser Leu Ala Cys Gly Val Phe Val Tyr Val Ser Val Asn His Leu  
275 280 285

Leu Ala Lys Gly Tyr Arg Pro Asn Lys Lys Val His Val Asp Glu Pro  
290 295 300

Arg Tyr Lys Phe Leu Ala Val Leu Phe Gly Val Val Val Ile Ala Ile  
305 310 315 320

Val Met Ile Trp Asp Thr  
325

&lt;210&gt; 1725

&lt;211&gt; 1539

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1725

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ccacctgaaa aaacctcttc ttctcgagc ctccgtaac tcaaacatc tccaaagtcg	120
ttacgggtat ggatctacc gcgaaatagg tccagtggtt tccgggtatt agttcggagc	180
tccgacaaga gtgaaagcag taattcgtat tacgtagaag gagataaagt aagtggaaac	240
aatgacgtcg ttctgtatt gcctagctct atcgctctcc catggtggga agagtttccg	300
aagcgtgtgg tgattgtgtt actctgtttc tcagcttttc ttctctgcaa tatggacaga	360
gtgaatatga gtatagctat acttccgatg tcagctgagt atggttgga tccagcaaca	420
gttggtctga ttacgtcttc ttctctctgg ggttacctc ttacacagat agctggtgga	480
atttgggcag acactgtagg agggaaaagg gttcttgat tcggtgttat ttggtgttca	540
atcgctacaa ttctcactcc ttagctgtct aaactcggc ttcttactt gtcgtgtgtt	600
cggtctttca tgggagttgg agaggggtgtt gcaatgcctg ctatgaataa tatattgtcg	660

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aagtgggttc ctgtgcaaga gagaagcaga tcaactcgcc ttgtttacag cggaatgtac 720
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<210> 1726

<211> 512

<212> PRT

<213> Arabidopsis thaliana

<400> 1726

Met Asn Ala Arg Ala Leu Leu Cys Ser Ser Asn Ile His Ser Leu Tyr  
1 5 10 15

Thr Ser Asn Arg Pro Pro Glu Lys Thr Ser Ser Ser Arg Ser Leu Arg  
20 25 30

Asn Leu Lys Pro Ser Pro Lys Ser Leu Arg Val Trp Ile Tyr Pro Arg  
35 40 45

Asn Arg Ser Ser Val Phe Arg Val Leu Val Arg Ser Ser Asp Lys Ser  
50 55 60

Glu Ser Ser Asn Ser Tyr Tyr Val Glu Gly Asp Lys Val Ser Gly Asn  
65 70 75 80

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Asn Asp Val Val Ser Asp Ser Pro Ser Ser Ile Val Leu Pro Trp Trp  
 85 90 95  
 Glu Glu Phe Pro Lys Arg Trp Val Ile Val Leu Leu Cys Phe Ser Ala  
 100 105  
 Phe Leu Leu Cys Asn Met Asp Arg Val Asn Met Ser Ile Ala Ile Leu  
 115 120 125  
 Pro Met Ser Ala Glu Tyr Gly Trp Asn Pro Ala Thr Val Gly Leu Ile  
 130 135 140  
 Gln Ser Ser Phe Phe Trp Gly Tyr Leu Leu Thr Gln Ile Ala Gly Gly  
 145 150 155 160  
 Ile Trp Ala Asp Thr Val Gly Gly Lys Arg Val Leu Gly Phe Gly Val  
 165 170 175  
 Ile Trp Trp Ser Ile Ala Thr Ile Leu Thr Pro Val Ala Ala Lys Leu  
 180 185 190  
 Gly Leu Pro Tyr Leu Leu Val Val Arg Ala Phe Met Gly Val Gly Glu  
 195 200 205  
 Gly Val Ala Met Pro Ala Met Asn Asn Ile Leu Ser Lys Trp Val Pro  
 210 215 220  
 Val Gln Glu Arg Ser Arg Ser Leu Ala Leu Val Tyr Ser Gly Met Tyr  
 225 230 235 240  
 Leu Gly Ser Val Thr Gly Leu Ala Phe Ser Pro Phe Leu Ile His Gln  
 245 250 255  
 Phe Gly Trp Pro Ser Val Phe Tyr Ser Phe Gly Ser Leu Gly Thr Val  
 260 265 270  
 Trp Leu Thr Leu Trp Leu Thr Lys Ala Glu Ser Ser Pro Leu Glu Asp  
 275 280 285  
 Pro Thr Leu Leu Pro Glu Glu Arg Lys Leu Ile Ala Asp Asn Cys Ala  
 290 295 300  
 Ser Lys Glu Pro Val Lys Ser Ile Pro Trp Arg Leu Ile Leu Ser Lys  
 305 310 315 320  
 Pro Pro Val Trp Ala Leu Ile Ser Cys His Phe Cys His Asn Trp Gly  
 325 330 335

047-E2F-PCT.ST25.txt

Thr Phe Ile Leu Leu Thr Trp Met Pro Thr Tyr Tyr His Gln Val Leu  
340 345 350

Lys Phe Asn Leu Met Glu Ser Gly Leu Leu Ser Val Phe Pro Trp Met  
355 360 365

Thr Met Ala Ile Ser Ala Asn Ala Gly Gly Trp Ile Ala Asp Thr Leu  
370 375 380

Val Ser Arg Gly Phe Ser Val Thr Asn Val Arg Lys Ile Met Gln Thr  
385 390 395 400

Ile Gly Phe Leu Gly Pro Ala Phe Phe Leu Thr Gln Leu Lys His Ile  
405 410 415

Asp Ser Pro Thr Met Ala Val Leu Cys Met Ala Cys Ser Gln Gly Thr  
420 425 430

Asp Ala Phe Ser Gln Ser Gly Leu Tyr Ser Asn His Gln Asp Ile Ala  
435 440 445

Pro Arg Tyr Ser Gly Val Leu Leu Gly Leu Ser Asn Thr Ala Gly Val  
450 455 460

Leu Ala Gly Val Leu Gly Thr Ala Ala Thr Gly His Ile Leu Gln His  
465 470 475 480

Gly Ser Trp Asp Asp Val Phe Thr Ile Ser Val Gly Leu Tyr Leu Val  
485 490 495

Gly Thr Val Ile Trp Asn Leu Phe Ser Thr Gly Glu Lys Ile Ile Asp  
500 505 510

<210> 1727

<211> 840

<212> DNA

<213> Arabidopsis thaliana

<400> 1727  
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gtaacaaag ccgcaatttc agaggaagaa gagaagcgaa gattggcggtt agaggaggtg 120  
aagtttttgc agaagctgcg agagaggaaa ttaggtatcc cagctttatc ttctacggcg 180

caatctagca tcggaaaagt gaaaccagtg gagaaaactg aaactgaagg agagaaagag	240
gagcttgtgt tgcaagatac ttttgctcaa gagactgctg ttttgattga agatcccaac	300
atggtaaagt acattgaaca agaattggcg aagaaacggg gaagaaatat tgatgatgca	360
gaggagggtg agaacgaatt gaagcgagtg gaagatgagt tatataagat acctgatcat	420
cttaaagtca agaagcgtag ctcggaagag agctcgacgc agtggactac cggaatagca	480
gaagtccaac tcccaattga atacaagctg aagaacattg aagaaactga agctgccaag	540
aagctttttgc aagagaggag acttatgggt cggccaaagt cagagttag tatcccgctt	600
agttatagtg cggattactt ccaacgcggg aaagattatg ctgagaagct taggagagag	660
catcctgagc tatacaaga tagaggagga cctcaagcgg acggtgaagc agctaaacct	720
tctactagca gtagtactaa taataatgct gattcaggga aaagcagaca agcagcaact	780
gatcaaatca tgttggaacg atttcgaag agagagcgta accgtgtaat gcgaagataa	840

&lt;210&gt; 1728

&lt;211&gt; 279

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1728

Met	Pro	Pro	Lys	Arg	Asn	Phe	Arg	Lys	Arg	Ser	Phe	Glu	Glu	Glu	Glu
1				5					10					15	

Glu	Asp	Asn	Asp	Val	Asn	Lys	Ala	Ala	Ile	Ser	Glu	Glu	Glu	Glu	Lys
		20						25					30		

Arg	Arg	Leu	Ala	Leu	Glu	Glu	Val	Lys	Phe	Leu	Gln	Lys	Leu	Arg	Glu
		35					40					45			

Arg	Lys	Leu	Gly	Ile	Pro	Ala	Leu	Ser	Ser	Thr	Ala	Gln	Ser	Ser	Ile
	50					55					60				

Gly	Lys	Val	Lys	Pro	Val	Glu	Lys	Thr	Glu	Thr	Glu	Gly	Glu	Lys	Glu
65					70					75					80

Glu	Leu	Val	Leu	Gln	Asp	Thr	Phe	Ala	Gln	Glu	Thr	Ala	Val	Leu	Ile
			85						90					95	

Glu	Asp	Pro	Asn	Met	Val	Lys	Tyr	Ile	Glu	Gln	Glu	Leu	Ala	Lys	Lys
			100					105					110		



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Arg Gly Arg Asn Ile Asp Asp Ala Glu Glu Val Glu Asn Glu Leu Lys  
115 120 125

Arg Val Glu Asp Glu Leu Tyr Lys Ile Pro Asp His Leu Lys Val Lys  
130 135 140

Lys Arg Ser Ser Glu Glu Ser Ser Thr Gln Trp Thr Thr Gly Ile Ala  
145 150 155 160

Glu Val Gln Leu Pro Ile Glu Tyr Lys Leu Lys Asn Ile Glu Glu Thr  
165 170 175

Glu Ala Ala Lys Lys Leu Leu Gln Glu Arg Arg Leu Met Gly Arg Pro  
180 185 190

Lys Ser Glu Phe Ser Ile Pro Ser Ser Tyr Ser Ala Asp Tyr Phe Gln  
195 200 205

Arg Gly Lys Asp Tyr Ala Glu Lys Leu Arg Arg Glu His Pro Glu Leu  
210 215 220

Tyr Lys Asp Arg Gly Gly Pro Gln Ala Asp Gly Glu Ala Ala Lys Pro  
225 230 235 240

Ser Thr Ser Ser Ser Thr Asn Asn Asn Ala Asp Ser Gly Lys Ser Arg  
245 250 255

Gln Ala Ala Thr Asp Gln Ile Met Leu Glu Arg Phe Arg Lys Arg Glu  
260 265 270

Arg Asn Arg Val Met Arg Arg  
275

<210> 1729

<211> 1053

<212> DNA

<213> Arabidopsis thaliana

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cctctaagta tcaacaccaa atcaagagta ctaagtgcat cagcatttcc actattctcg 120  
tccactcttc acctcccttc cagatccctc tccatccgcc tctcgccgaa tggttcccg 180  
tctctcactg tggatatctc tgttttgta gaggacagag ctactaacgt tagtggctct 240

```

gggacagatg cattcaagct gacttacttg gagggcaata gctggctatg ggaaacagct      300
ggactgaaaa tcctagttag tccgattctt gtgggtaatt tggactttgg aatcccatgg      360
ctttatgatg ctgccaaagag atatttgaag gccttcaagc ttgatgatct ccttgaagtt      420
gattgccttc tcataactca aagccttgat gatcattgtc atttgaatac ccttaggcca      480
ctttccgaga aatctccagg cataaagggt atagcaacc ccaatgctaa gcctttgcta      540
gatcctcttt ttagtaacgt cacttatctg gaacctggag atagctttga gctaaatgca      600
agaaacgggt ctaaggttcg agttaaagcc acagctggac ctgtccttgg tccaccgtgg      660
caacgccttg aaaacgggta tctccttgta tcccctgaag atcagatatc tctctactat      720
gaaccgcatt gtgtatgcaa catggaactt ctgaagaatg aaagagccga cattgtaatc      780
acaccggta tcaacaact tctcccacga ttactcttg ttctgtgta agaagacgt      840
gtccagcttg ccaactctt gaaagccaag ttgtttgtgc cgaagcaaaa tggcgagctt      900
gaagcaaaag gacttttagc aagcctagta aagaagaag gaactattga atcatttaag      960
gaattattgt taaaagagct ccagaagct caagtgttgg agcctatagc aggtataccg     1020
ctagagatct tggttccatc ttcagacatt tag                                  1053

```

&lt;210&gt; 1730

&lt;211&gt; 350

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1730

```

Met Ala Leu Val Val Ser Gly Gly Lys Ala Ala Met Met Pro Leu His
1           5           10

```

```

Ala Asn Ser Leu Pro Leu Ser Ile Asn Thr Lys Ser Arg Val Leu Ser
           20           25           30

```

```

Ala Ser Ala Phe Pro Leu Phe Ser Ser Thr Pro His Leu Pro Ser Arg
           35           40           45

```

```

Ser Leu Ser Ile Arg Leu Ser Pro Asn Val Ser Arg Ser Leu Thr Val
           50           55           60

```

```

Val Ser Ser Val Leu Ser Glu Asp Arg Ala Thr Asn Val Ser Gly Ser
65           70           75           80

```

```

Gly Thr Asp Ala Phe Lys Leu Thr Tyr Leu Glu Gly Asn Ser Trp Leu
           85           90           95

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047-E2F-PCT.ST25.txt

Trp Glu Thr Ala Gly Leu Lys Ile Leu Val Asp Pro Ile Leu Val Gly  
100 105 110

Asn Leu Asp Phe Gly Ile Pro Trp Leu Tyr Asp Ala Ala Lys Arg Tyr  
115 120 125

Leu Lys Ala Phe Lys Leu Asp Asp Leu Pro Glu Val Asp Cys Leu Leu  
130 135 140

Ile Thr Gln Ser Leu Asp Asp His Cys His Leu Asn Thr Leu Arg Pro  
145 150 155 160

Leu Ser Glu Lys Ser Pro Gly Ile Lys Val Ile Ala Thr Pro Asn Ala  
165 170 175

Lys Pro Leu Leu Asp Pro Leu Phe Ser Asn Val Thr Tyr Leu Glu Pro  
180 185 190

Gly Asp Ser Phe Glu Leu Asn Ala Arg Asn Gly Ser Lys Val Arg Val  
195 200 205

Lys Ala Thr Ala Gly Pro Val Leu Gly Pro Pro Trp Gln Arg Pro Glu  
210 215 220

Asn Gly Tyr Leu Leu Val Ser Pro Glu Asp Gln Ile Ser Leu Tyr Tyr  
225 230 235 240

Glu Pro His Cys Val Cys Asn Met Glu Leu Leu Lys Asn Glu Arg Ala  
245 250 255

Asp Ile Val Ile Thr Pro Val Ile Lys Gln Leu Leu Pro Arg Phe Thr  
260 265 270

Leu Val Ser Gly Gln Glu Asp Ala Val Gln Leu Ala Lys Leu Leu Lys  
275 280 285

Ala Lys Phe Val Val Pro Met Gln Asn Gly Glu Leu Glu Ala Lys Gly  
290 295 300

Leu Leu Ala Ser Leu Val Lys Lys Glu Gly Thr Ile Glu Ser Phe Lys  
305 310 315 320

Glu Leu Leu Leu Lys Glu Leu Pro Glu Ala Gln Val Leu Glu Pro Ile  
325 330 335

Ala Gly Ile Pro Leu Glu Ile Leu Val Pro Ser Ser Asp Ile

<210> 1731  
 <211> 1143  
 <212> DNA  
 <213> *Arabidopsis thaliana*

<400> 1731  
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 agtaagtatg tgtacatacc gtctcacgcg tggttcttgg cattaattgt ctacttgccg 180  
 gtattggata aggtaattgga aggtgagtat gttgatatta aggagcctat gaaaatacca 240  
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 aatacttggg gggagttaca agggaagact ctgctgctgc taagagagga catagatttg 420  
 aaccgggtta taaaagtacc ggtttatcct attggaccta ttgttaggac taatgtgctt 480  
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 ggagcaagct caaaagatga tgatcaagta agtgacggtc taccagaagg tttcttgagc 720  
 cgcacacgtg gtgtagggct tgtggttaacg caatgggcac cgcaagttga gatcttaagc 780  
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 ttgctgacgg aggagattgg tatggctatt cgtacgtcag agttaccgtc gaagaaagtg 960  
 atcagccggg aagaagtggc gtctttggty aagaagattg tagcggaaga ggataaagaa 1020  
 ggacgaagaa taaagactaa agctgaagag gtgagggtta gtcccaagc agcttggact 1080  
 catgggtggg cgtctcatag ttctctcttt gaatgggcaa aacgatgtgg gcttgtatct 1140  
 taa 1143

<210> 1732  
 <211> 380  
 <212> PRT  
 <213> *Arabidopsis thaliana*

&lt;400&gt; 1732

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Met Arg Glu Met Lys Ser Thr Val Arg Asp Ala Val Lys Ser Met Lys
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Gln Lys Pro Thr Val Met Ile Val Asp Phe Phe Gly Thr Ala Leu Leu
20     25     30
Ser Ile Thr Asp Val Gly Val Thr Ser Lys Tyr Val Tyr Ile Pro Ser
35     40     45
His Ala Trp Phe Leu Ala Leu Ile Val Tyr Leu Pro Val Leu Asp Lys
50     55     60
Val Met Glu Gly Glu Tyr Val Asp Ile Lys Glu Pro Met Lys Ile Pro
65     70     75     80
Gly Cys Lys Pro Val Gly Pro Lys Glu Leu Leu Asp Thr Met Leu Asp
85     90     95
Arg Ser Asp Gln Gln Tyr Arg Asp Cys Val Gln Ile Gly Leu Glu Ile
100    105    110
Pro Met Ser Asp Gly Val Leu Val Asn Thr Trp Gly Glu Leu Gln Gly
115    120    125
Lys Thr Leu Ala Ala Leu Arg Glu Asp Ile Asp Leu Asn Arg Val Ile
130    135    140
Lys Val Pro Val Tyr Pro Ile Gly Pro Ile Val Arg Thr Asn Val Leu
145    150    155    160
Ile Glu Lys Pro Asn Ser Thr Phe Glu Trp Leu Asp Lys Gln Glu Glu
165    170    175
Arg Ser Val Val Tyr Val Cys Leu Gly Ser Gly Gly Thr Leu Ser Phe
180    185    190
Glu Gln Thr Met Glu Leu Ala Trp Gly Leu Glu Leu Ser Cys Gln Ser
195    200    205
Phe Leu Trp Val Leu Arg Lys Pro Pro Ser Tyr Leu Gly Ala Ser Ser
210    215    220
Lys Asp Asp Asp Gln Val Ser Asp Gly Leu Pro Glu Gly Phe Leu Asp
225    230    235    240

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Arg Thr Arg Gly Val Gly Leu Val Val Thr Gln Trp Ala Pro Gln Val  
245 250 255

Glu Ile Leu Ser His Arg Ser Ile Gly Gly Phe Leu Ser His Cys Gly  
260 265 270

Trp Ser Ser Val Leu Glu Ser Leu Thr Lys Gly Val Pro Ile Ile Ala  
275 280 285

Trp Pro Leu Tyr Ala Glu Gln Trp Met Asn Ala Thr Leu Leu Thr Glu  
290 295 300

Glu Ile Gly Met Ala Ile Arg Thr Ser Glu Leu Pro Ser Lys Lys Val  
305 310 315 320

Ile Ser Arg Glu Glu Val Ala Ser Leu Val Lys Lys Ile Val Ala Glu  
325 330 335

Glu Asp Lys Glu Gly Arg Lys Ile Lys Thr Lys Ala Glu Glu Val Arg  
340 345 350

Val Ser Ser Glu Arg Ala Trp Thr His Gly Gly Ser Ser His Ser Ser  
355 360 365

Leu Phe Glu Trp Ala Lys Arg Cys Gly Leu Val Ser  
370 375 380

<210> 1733

<211> 1575

<212> DNA

<213> Arabidopsis thaliana

<400> 1733  
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ttgtgtagtg tcagagctag cggcggcgga agttccgcta gtgagagttg tgtagcggtg 180  
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cctatatcaa ttggtgatgg tgctttggat ctagtgggta ttggttgtgg tcctgctggt 360  
ttagccttgg ctgcagaatc agctaagctt ggattaaaag ttggactcat tgggtccagat 420  
cttcctttta ctaacaatta cggtgtttgg gaagatgaat tcaatgatct tgggctgcaa 480

047-E2F-PCT.ST25.txt

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aaatgtattg agcatgtttg gagagagact attgtgtatc tggatgatga caagcctatt 540
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agggtgtgtc agtcagggtg ctctgtacctt agctcgaaag ttgacagcat aacagaagct 660
tctgatggcc ttgacttgtt tgcttgtgac gacaataacg tcattcccctg caggcttgcc 720
actgttgctt ctggagcagc ttcgggaaaag ctcttgcaat acgaagtgtg tggacctaga 780
gtctgtgtgc aaactgcata cggcgtggag gttgaggtgg aaaatagtc cc atgatcca 840
gatcaaatgg ttttcatgga ttacagagat tatactaacg agaaagtctg gagcttagaa 900
gctgagtatc caacgtttct gtacgccatg cctatgacaa agtcaagact cttcttcgag 960
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gctagcatgg tacatccccg aacaggctat tcagttgtga gatctttgtc tgaagctcca 1200
aaatattgat cagtcatcgc agagatacta agagaagaga ctaccaaaca gatcaacagt 1260
aatatttcaa gacaagcttg ggatacttta tggccaccag aaaggaaaag acagagagca 1320
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ttccgtactt tcttccgcct tccaaaatgg atgtggcaag ggtttctagg atcaacatta 1440
acatcaggag atctcgttct ctttgcttta tacatgttcg tcatttcacc aaacaatttg 1500
agaaaaggtc tcatcaatca tctcatctct gatccaaccg gagcaaccat gataaaaacc 1560
tatctcaag tatga 1575

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<210> 1734

<211> 524

<212> PRT

<213> Arabidopsis thaliana

<400> 1734

Met Glu Cys Val Gly Ala Arg Asn Phe Ala Ala Met Ala Val Ser Thr  
1 5 10 15

Phe Pro Ser Trp Ser Cys Arg Arg Lys Phe Pro Val Val Lys Arg Tyr  
20 25 30

Ser Tyr Arg Asn Ile Arg Phe Gly Leu Cys Ser Val Arg Ala Ser Gly  
35 40 45

047-E2F-PCT.ST25.txt

Gly Gly Ser Ser Gly Ser Glu Ser Cys Val Ala Val Arg Glu Asp Phe  
 50 55 60  
 Ala Asp Glu Glu Asp Phe Val Lys Ala Gly Gly Ser Glu Ile Leu Phe  
 65 70 75 80  
 Val Gln Met Gln Gln Asn Lys Asp Met Asp Glu Gln Ser Lys Leu Val  
 85 90 95  
 Asp Lys Leu Pro Pro Ile Ser Ile Gly Asp Gly Ala Leu Asp Leu Val  
 100 105 110  
 Val Ile Gly Cys Gly Pro Ala Gly Leu Ala Leu Ala Ala Glu Ser Ala  
 115 120 125  
 Lys Leu Gly Leu Lys Val Gly Leu Ile Gly Pro Asp Leu Pro Phe Thr  
 130 135 140  
 Asn Asn Tyr Gly Val Trp Glu Asp Glu Phe Asn Asp Leu Gly Leu Gln  
 145 150 155 160  
 Lys Cys Ile Glu His Val Trp Arg Glu Thr Ile Val Tyr Leu Asp Asp  
 165 170 175  
 Asp Lys Pro Ile Thr Ile Gly Arg Ala Tyr Gly Arg Val Ser Arg Arg  
 180 185 190  
 Leu Leu His Glu Glu Leu Leu Arg Arg Cys Val Glu Ser Gly Val Ser  
 195 200 205  
 Tyr Leu Ser Ser Lys Val Asp Ser Ile Thr Glu Ala Ser Asp Gly Leu  
 210 215 220  
 Arg Leu Val Ala Cys Asp Asp Asn Asn Val Ile Pro Cys Arg Leu Ala  
 225 230 235 240  
 Thr Val Ala Ser Gly Ala Ala Ser Gly Lys Leu Leu Gln Tyr Glu Val  
 245 250 255  
 Gly Gly Pro Arg Val Cys Val Gln Thr Ala Tyr Gly Val Glu Val Glu  
 260 265 270  
 Val Glu Asn Ser Pro Tyr Asp Pro Asp Gln Met Val Phe Met Asp Tyr  
 275 280 285  
 Arg Asp Tyr Thr Asn Glu Lys Val Arg Ser Leu Glu Ala Glu Tyr Pro  
 290 295 300



047-E2F-PCT.ST25.txt

Thr Phe Leu Tyr Ala Met Pro Met Thr Lys Ser Arg Leu Phe Phe Glu  
305 310 315 320

Glu Thr Cys Leu Ala Ser Lys Asp Val Met Pro Phe Asp Leu Leu Lys  
325 330 335

Thr Lys Leu Met Leu Arg Leu Asp Thr Leu Gly Ile Arg Ile Leu Lys  
340 345 350

Thr Tyr Glu Glu Glu Trp Ser Tyr Ile Pro Val Gly Gly Ser Leu Pro  
355 360 365

Asn Thr Glu Gln Lys Asn Leu Ala Phe Gly Ala Ala Ala Ser Met Val  
370 375 380

His Pro Ala Thr Gly Tyr Ser Val Val Arg Ser Leu Ser Glu Ala Pro  
385 390 395 400

Lys Tyr Ala Ser Val Ile Ala Glu Ile Leu Arg Glu Glu Thr Thr Lys  
405 410 415

Gln Ile Asn Ser Asn Ile Ser Arg Gln Ala Trp Asp Thr Leu Trp Pro  
420 425 430

Pro Glu Arg Lys Arg Gln Arg Ala Phe Phe Leu Phe Gly Leu Ala Leu  
435 440 445

Ile Val Gln Phe Asp Thr Glu Gly Ile Arg Ser Phe Phe Arg Thr Phe  
450 455 460

Phe Arg Leu Pro Lys Trp Met Trp Gln Gly Phe Leu Gly Ser Thr Leu  
465 470 475 480

Thr Ser Gly Asp Leu Val Leu Phe Ala Leu Tyr Met Phe Val Ile Ser  
485 490 495

Pro Asn Asn Leu Arg Lys Gly Leu Ile Asn His Leu Ile Ser Asp Pro  
500 505 510

Thr Gly Ala Thr Met Ile Lys Thr Tyr Leu Lys Val  
515 520

<210> 1735

<211> 984

<212> DNA

<213> *Arabidopsis thaliana*

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<400> 1735
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cctgttcttaa tctctgcaag ccctaataag atcaatttca cgttgagaag gagaagaaaa      120
agattcttac ttagagtctc tgctgtgtcg tataaggaat tcgcagagtc tgcttttagaa      180
gaaaccagga aaaggatcgt tcttgaacct tcacatctcc agtatagtag catgacagga      240
ctagatggta agaccgaact tcaaatgctt gcttttaaat cttcaaagat tagactcttg      300
aggagtatgg caatagagaa tgagacaatg caggctcttg actttgcggg tttcatggag      360
cctgagtatg atactcccat attctgtgct aactttttca catctacca cgttaacata      420
gttgatttgg accttaatcc tttgcatcag ttgactgacc agacggatta ccaagacaag      480
tattataaca agataatgtc catatatcac aaatatgctg agactttccc atggggaggg      540
aaattgactg gtgaatccat aaagttttct tcgcctttgg tgatgtggac taggttttcg      600
tctagcaaag aaaaacataa ggctttgttc tctgcgttcc tagagtacta tcaggcatgg      660
cttgagatga caatccaagt gaggaggag atggaacct ctcagtgtgag agccaattgt      720
gaagcacaac acaagtacct gacatggcga gcacaaaagg atcctggaca tggcttctct      780
aaaagattag taggtgaagc aaaggcaaag gagctgctaa gggatttcct gttcaatggg      840
gtggatgagt taggcacaaa aacattcatt gattactttc cagagtacca aacagaagat      900
ggaactgtaa gcgataaacg aagtatcatt gggaagtc atgaaactcg tccatgggat      960
ttaacaggac aattttatcg cttaa                                         984

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&lt;210&gt; 1736

&lt;211&gt; 327

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1736

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Met Ala Leu Ser Met Glu Phe Gly Phe Ser Ile Gly Ser Cys Phe Lys
1           5           10           15

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Ala Pro Asn Pro Pro Val Leu Ile Ser Ala Ser Pro Asn Lys Ile Asn
20           25           30

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```

Phe Thr Leu Arg Arg Arg Lys Lys Arg Phe Leu Leu Arg Val Ser Ala
35           40           45

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Val Ser Tyr Lys Glu Phe Ala Glu Ser Ala Leu Glu Glu Thr Arg Lys  
50 55 60

Arg Ile Val Leu Glu Pro Ser His Leu Gln Tyr Ser Ser Met Thr Gly  
65 70 75 80

Leu Asp Gly Lys Thr Glu Leu Gln Met Leu Ala Phe Lys Ser Ser Lys  
85 90 95

Ile Arg Leu Leu Arg Ser Met Ala Ile Glu Asn Glu Thr Met Gln Val  
100 105 110

Phe Asp Phe Ala Gly Phe Met Glu Pro Glu Tyr Asp Thr Pro Ile Phe  
115 120 125

Cys Ala Asn Phe Phe Thr Ser Thr Asn Val Asn Ile Val Val Leu Asp  
130 135 140

Leu Asn Pro Leu His Gln Leu Thr Asp Gln Thr Asp Tyr Gln Asp Lys  
145 150 155 160

Tyr Tyr Asn Lys Ile Met Ser Ile Tyr His Lys Tyr Ala Glu Thr Phe  
165 170 175

Pro Trp Gly Gly Lys Leu Thr Gly Glu Ser Ile Lys Phe Phe Ser Pro  
180 185 190

Leu Val Met Trp Thr Arg Phe Ser Ser Ser Lys Glu Lys His Lys Ala  
195 200 205

Leu Phe Ser Ala Phe Leu Glu Tyr Tyr Gln Ala Trp Leu Glu Met Thr  
210 215 220

Ile Gln Val Arg Glu Glu Met Glu Pro Ser His Val Arg Ala Asn Cys  
225 230 235 240

Glu Ala Gln His Lys Tyr Leu Thr Trp Arg Ala Gln Lys Asp Pro Gly  
245 250 255

His Gly Leu Leu Lys Arg Leu Val Gly Glu Ala Lys Ala Lys Glu Leu  
260 265 270

Leu Arg Asp Phe Leu Phe Asn Gly Val Asp Glu Leu Gly Thr Lys Thr  
275 280 285

Phe Ile Asp Tyr Phe Pro Glu Tyr Gln Thr Glu Asp Gly Thr Val Ser  
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290

295

Asp Lys Arg Ser Ile Ile Gly Lys Ser Tyr Glu Thr Arg Pro Trp Asp  
305 310 315 320

Leu Thr Gly Gln Phe Ile Gly  
325

&lt;210&gt; 1737

&lt;211&gt; 1269

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

<400> 1737  
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atcgtcatat ctctcgcac ccttttcgac acggacgtga acaaataccg gcaagtccta 120  
tataaaggct acttatcgga aatgttcata cttacatgg acccaagtga tgattggtat 180  
ttcattactt atcttgattg tggcgatttt ggctgcggtc aatgcgccgt atctcttcaa 240  
ccgtacactg attgtccagc ggggtgcagtt ttatggatg gtatttttgc tggtaagat 300  
ggaactcccg caaaaaatccc aaaagtattg tgcatttttg aaaaatatgc tggagatatc 360  
atgtggcgac atacagaagc tgaatttcca aacttagaaa ttacggagggt tagaccggac 420  
gtaagtcttg tagcccgatg tgtgacgacc gtgggaaact atgactacat agttgattat 480  
gagttcaagc ctagtgtgtc catcaaaatg ggggtcggct taaccggtgt tttagaagtg 540  
aaaccggtag aatatattca cacatccgaa atcaaaactag gggaagacat acacgggaca 600  
attgtcgccg acaacaccgt cgggtgttaac cagcaccatt tcgtgacatt ccgtcttcac 660  
cttgacatcg acggtaccga aaattccttt gttcgttaac aacttgtyac cagcagggtc 720  
ccaaaatctg ttaacacacc gagaaaaacc tattggacaa cgaagccaaa gacggccaag 780  
accgaggcag aggctcgggt gaaactaggt ttgaaggcgg aggagttagt tgtgtttaac 840  
cctaaccgaa agacgaagca tggcaatgag gttggatacc gtttacttca tggatccgct 900  
gcaggccac tcctggccca agatgatttc ccgcagattc gagctgcatt caccaactat 960  
aacgtgtgga tcacgcctga taacagggtc gaggtttggg cagggtggtt gtacgtgac 1020  
aggagccaag gcgacgatac gttggcagtg ttgtctcaaa ggaatagaaa aatagagaag 1080  
gaagatatag tgatgtggtc caccgtcggg ttccaccatg ttctagcca ggaagattac 1140  
ccgacgatgc ctactttatc cgggtgcttt gagctccgac cgaccaactt ttctgagcga 1200  
aacctgtgcc tcaagaccaa acccgtaaaa gttaccaccg ctcgaaagtg cactcctaaa 1260

aacgattaa

1269

&lt;210&gt; 1738

&lt;211&gt; 422

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1738

Met Val Met Ser Arg Trp Ala Asn Trp Glu Phe His Ile Ser Phe Asp  
1 5 10 15Val Arg Ala Gly Ile Val Ile Ser Leu Ala Ser Leu Phe Asp Thr Asp  
20 25 30Val Asn Lys Tyr Arg Gln Val Leu Tyr Lys Gly His Leu Ser Glu Met  
35 40 45Phe Ile Pro Tyr Met Asp Pro Ser Asp Asp Trp Tyr Phe Ile Thr Tyr  
50 55 60Leu Asp Cys Gly Asp Phe Gly Cys Gly Gln Cys Ala Val Ser Leu Gln  
65 70 75 80Pro Tyr Thr Asp Cys Pro Ala Gly Ala Val Phe Met Asp Gly Ile Phe  
85 90 95Ala Gly Gln Asp Gly Thr Pro Ala Lys Ile Pro Lys Val Met Cys Ile  
100 105 110Phe Glu Lys Tyr Ala Gly Asp Ile Met Trp Arg His Thr Glu Ala Glu  
115 120 125Ile Pro Asn Leu Glu Ile Thr Glu Val Arg Pro Asp Val Ser Leu Val  
130 135 140Ala Arg Ile Val Thr Thr Val Gly Asn Tyr Asp Tyr Ile Val Asp Tyr  
145 150 155 160Glu Phe Lys Pro Ser Gly Ser Ile Lys Met Gly Val Gly Leu Thr Gly  
165 170 175Val Leu Glu Val Lys Pro Val Glu Tyr Ile His Thr Ser Glu Ile Lys  
180 185 190

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Leu Gly Glu Asp Ile His Gly Thr Ile Val Ala Asp Asn Thr Val Gly  
 195 200  
 Val Asn His Asp His Phe Val Thr Phe Arg Leu His Leu Asp Ile Asp  
 210 215  
 Gly Thr Glu Asn Ser Phe Val Arg Asn Glu Leu Val Thr Thr Arg Ser  
 225 230 235 240  
 Pro Lys Ser Val Asn Thr Pro Arg Lys Thr Tyr Trp Thr Thr Lys Pro  
 245 250 255  
 Lys Thr Ala Lys Thr Glu Ala Glu Ala Arg Val Lys Leu Gly Leu Lys  
 260 265 270  
 Ala Glu Glu Leu Val Val Val Asn Pro Asn Arg Lys Thr Lys His Gly  
 275 280 285  
 Asn Glu Val Gly Tyr Arg Leu Leu His Gly Ser Ala Ala Gly Pro Leu  
 290 295 300  
 Leu Ala Gln Asp Asp Phe Pro Gln Ile Arg Ala Ala Phe Thr Asn Tyr  
 305 310 315 320  
 Asn Val Trp Ile Thr Pro Tyr Asn Arg Ser Glu Val Trp Ala Gly Gly  
 325 330 335  
 Leu Tyr Ala Asp Arg Ser Gln Gly Asp Asp Thr Leu Ala Val Trp Ser  
 340 345 350  
 Gln Arg Asn Arg Lys Ile Glu Lys Glu Asp Ile Val Met Trp Tyr Thr  
 355 360 365  
 Val Gly Phe His His Val Pro Ser Gln Glu Asp Tyr Pro Thr Met Pro  
 370 375 380  
 Thr Leu Ser Gly Gly Phe Glu Leu Arg Pro Thr Asn Phe Phe Glu Arg  
 385 390 395 400  
 Asn Pro Val Leu Lys Thr Lys Pro Val Lys Val Thr Thr Ala Arg Lys  
 405 410 415  
 Cys Thr Pro Lys Asn Asp  
 420

<210> 1739

&lt;211&gt; 1326

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1739

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tacagtccca tcgaatacaa ccccgacgta cgtgggtctg tacccttcag tgacaacttc    180
cgtctctgtt tctacaacac aaccccaaac gcatacactc tcgtctctag aatcggaaac    240
agagtccaag aatccactct cataggggtc tgggaagcaa acagaggctc accggtcaaa    300
gaaaacgcga cgttgacttt tggcgaagac ggaaacctcg tactcgctga agccgatgga    360
cgcttggtat ggcaaacgaa cacagctaac aaaggcgccg tggggatcaa aatcttggag    420
aatggcaata tggtaatata cgattccagt ggaaaatttg tatggcagag ctttgattct    480
cccaccgaca cacttctcgt tggacagtct ttgaaactca acggtcggac caaactcgta    540
agcagactgt ctccatctgt caacacaaac ggaccgtaca gtctcgtgat ggaagccaag    600
aagctagtct tgtactacac gacaaacaaa actccgaaac caatcgctta ttttgaatac    660
gaattcttca ccaagataac acaattccag tcaatgacgt tccaagctgt ggaagattcc    720
gacacaacgt ggggtctagt catggaaggt gtcgattctg gttctaaatt caacgtttca    780
acgttcctct cacggccgaa acacaacgcg acgttgagtt ttattcggtt agaatcagac    840
ggaacatcat gagtttggag ttacagtacg ttggcgactt ccacggcttg ggacgtgaca    900
tacacggcgt ttaccaacgc cgacactgac ggtaacgacg agtgtaggat ccttgagcat    960
tgtttggggt ttggtttgtg taagaaaggc cagtgtaacg cttgtcctag cgacaaaggg   1020
cttcttggtt gggacgagac atgtaaatct ccaagtctcg caagttcgca tccaagaca   1080
tttactact tcaagatcga aggagctgat agtttcata caaaataaa cgggtgatca   1140
tcgacgacgg agagtgcgtg tggggacaag tgtacgagag attgcaaatg tttagggttt   1200
ttctacaata gaaagatgtc gaggtgttgg ttgggtctac agctcaagac attgactaga   1260
accggagatt cttccctggt tgcttatgtc aaagctccta atgcaacaaa aaagtcaact   1320
ctttga

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&lt;210&gt; 1740

&lt;211&gt; 441

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1740

Met Lys Phe Ser Ile Thr Leu Ala Leu Cys Phe Thr Leu Ser Ile Phe  
1 5 10 15Leu Ile Gly Ser Gln Ala Lys Val Pro Val Asp Asp Gln Phe Arg Val  
20 25 30Val Asn Glu Gly Gly Tyr Thr Asp Tyr Ser Pro Ile Glu Tyr Asn Pro  
35 40 45Asp Val Arg Gly Phe Val Pro Phe Ser Asp Asn Phe Arg Leu Cys Phe  
50 55 60Tyr Asn Thr Thr Pro Asn Ala Tyr Thr Leu Ala Leu Arg Ile Gly Asn  
65 70 75 80Arg Val Gln Glu Ser Thr Leu Arg Trp Val Trp Glu Ala Asn Arg Gly  
85 90 95Ser Pro Val Lys Glu Asn Ala Thr Leu Thr Phe Gly Glu Asp Gly Asn  
100 105 110Leu Val Leu Ala Glu Ala Asp Gly Arg Leu Val Trp Gln Thr Asn Thr  
115 120 125Ala Asn Lys Gly Ala Val Gly Ile Lys Ile Leu Glu Asn Gly Asn Met  
130 135 140Val Ile Tyr Asp Ser Ser Gly Lys Phe Val Trp Gln Ser Phe Asp Ser  
145 150 155 160Pro Thr Asp Thr Leu Leu Val Gly Gln Ser Leu Lys Leu Asn Gly Arg  
165 170 175Thr Lys Leu Val Ser Arg Leu Ser Pro Ser Val Asn Thr Asn Gly Pro  
180 185 190Tyr Ser Leu Val Met Glu Ala Lys Lys Leu Val Leu Tyr Tyr Thr Thr  
195 200 205Asn Lys Thr Pro Lys Pro Ile Ala Tyr Phe Glu Tyr Glu Phe Phe Thr  
210 215 220Lys Ile Thr Gln Phe Gln Ser Met Thr Phe Gln Ala Val Glu Asp Ser  
225 230 235 240



Asp Thr Thr Trp Gly Leu Val Met Glu Gly Val Asp Ser Gly Ser Lys  
 245 250 255  
 Phe Asn Val Ser Thr Phe Leu Ser Arg Pro Lys His Asn Ala Thr Leu  
 260 265 270  
 Ser Phe Ile Arg Leu Glu Ser Asp Gly Asn Ile Arg Val Trp Ser Tyr  
 275 280 285  
 Ser Thr Leu Ala Thr Ser Thr Ala Trp Asp Val Thr Tyr Thr Ala Phe  
 290 295 300  
 Thr Asn Ala Asp Thr Asp Gly Asn Asp Glu Cys Arg Ile Pro Glu His  
 305 310 315 320  
 Cys Leu Gly Phe Gly Leu Cys Lys Lys Gly Gln Cys Asn Ala Cys Pro  
 325 330 335  
 Ser Asp Lys Gly Leu Leu Gly Trp Asp Glu Thr Cys Lys Ser Pro Ser  
 340 345 350  
 Leu Ala Ser Cys Asp Pro Lys Thr Phe His Tyr Phe Lys Ile Glu Gly  
 355 360 365  
 Ala Asp Ser Phe Met Thr Lys Tyr Asn Gly Gly Ser Ser Thr Thr Glu  
 370 375 380  
 Ser Ala Cys Gly Asp Lys Cys Thr Arg Asp Cys Lys Cys Leu Gly Phe  
 385 390 395 400  
 Phe Tyr Asn Arg Lys Ser Ser Arg Cys Trp Leu Gly Tyr Glu Leu Lys  
 405 410 415  
 Thr Leu Thr Arg Thr Gly Asp Ser Ser Leu Val Ala Tyr Val Lys Ala  
 420 425 430  
 Pro Asn Ala Asn Lys Lys Ser Thr Leu  
 435 440

&lt;210&gt; 1741

&lt;211&gt; 1467

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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<400> 1741
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cgctccattt ctagggtttc ggcgtcgatc tccacccga atagtgaaac tgacaagatc 180
tccgttaaac ctgtttacgt cccgacgtct cccaatcgcg aactcggagc tcctcacagt 240
ggataccatt tcgatggaac acctcggagc ttcttcgagg gatggtattt caggggtttcc 300
atcccagaga agaggggagag tttttgtttt atgtattctg tggagaatcc tgcatttcgg 360
cagagtttgt caccattgga agtggctcta tatggaccta gattcactgg tgttgagct 420
cagattcttg gcgctaatag taaatattta tgccaatagc aacaagactc tcacaatttc 480
tggggagatc gacatgagct agttttgggg aatactttta gtgctgtgcc aggcgcaaa 540
gtcccaaaca aggaggttcc accagaggaa ttaacagaa gagtgtccga agggttccaa 600
gctactccat tttggcatca aggtcacatt tgcgatgatg gccgtactga ctatgcggaa 660
actgtgaaat ctgctcgttg ggagtatagt actcgtcccg ttacggttg ggggtatggt 720
ggggccaac agaagtcaac tgcaggctgg cctgcagctt ttcctgtatt tgagcctcat 780
tggcagatat gcatggcagg aggcctttcc acagggtgga tagaatggg cggtgaaaagg 840
tttgagtttc gggatgcacc ttcttattca gagaagaatt ggggtggagg cttcccaaga 900
aaatggtttt gggtcacgtg taatgtcttt gaaggggcaa ctggagaagt tgccttaacc 960
gcaggtggcg ggttgaggca attgcctgga ttgactgaga cctatgaaaa tgcgtcactg 1020
gtttgtgtac actatgatgg aaaaatgtac gagtttgttc ctggaatgg tgttgttaga 1080
tgggaaatgt ctccctgggg ttattggtat ataactgcag agaacgaaaa ccatgtggtg 1140
gaactagagg caagaacaaa tgaagcgggt acacctctgc gtgctcctac cacagaagtt 1200
gggctagcta cggcttgcat agatagttgt tacggtgaat tgaagttgca gatatgggaa 1260
cggctatatg atggaagtaa aggcaagggt atattagaga caaagagctc aatggcagca 1320
gtggagatag gaggaggacc gtggtttggg acatggaag gagatacgag caacacgcc 1380
gagctactaa aacaggctct tcagggtcca ttggatcttg aaagcgctt aggttttggtc 1440
cctttcttca agccaccggg tctgtaa 1467

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<210> 1742

<211> 488

<212> PRT

<213> Arabidopsis thaliana

&lt;400&gt; 1742

Met Glu Ile Arg Ser Leu Ile Val Ser Met Asn Pro Asn Leu Ser Ser  
 1 5 10 15

Phe Glu Leu Ser Arg Pro Val Ser Pro Leu Thr Arg Ser Leu Val Pro  
 20 25 30

Phe Arg Ser Thr Lys Leu Val Pro Arg Ser Ile Ser Arg Val Ser Ala  
 35 40 45

Ser Ile Ser Thr Pro Asn Ser Glu Thr Asp Lys Ile Ser Val Lys Pro  
 50 55 60

Val Tyr Val Pro Thr Ser Pro Asn Arg Glu Leu Arg Thr Pro His Ser  
 65 70 75 80

Gly Tyr His Phe Asp Gly Thr Pro Arg Lys Phe Phe Glu Gly Trp Tyr  
 85 90 95

Phe Arg Val Ser Ile Pro Glu Lys Arg Glu Ser Phe Cys Phe Met Tyr  
 100 105 110

Ser Val Glu Asn Pro Ala Phe Arg Gln Ser Leu Ser Pro Leu Glu Val  
 115 120 125

Ala Leu Tyr Gly Pro Arg Phe Thr Gly Val Gly Ala Gln Ile Leu Gly  
 130 135 140

Ala Asn Asp Lys Tyr Leu Cys Gln Tyr Glu Gln Asp Ser His Asn Phe  
 145 150 155 160

Trp Gly Asp Arg His Glu Leu Val Leu Gly Asn Thr Phe Ser Ala Val  
 165 170 175

Pro Gly Ala Lys Ala Pro Asn Lys Glu Val Pro Pro Glu Glu Phe Asn  
 180 185 190

Arg Arg Val Ser Glu Gly Phe Gln Ala Thr Pro Phe Trp His Gln Gly  
 195 200 205

His Ile Cys Asp Asp Gly Arg Thr Asp Tyr Ala Glu Thr Val Lys Ser  
 210 215 220

Ala Arg Trp Glu Tyr Ser Thr Arg Pro Val Tyr Gly Trp Gly Asp Val  
 225 230 235 240

Gly Ala Lys Gln Lys Ser Thr Ala Gly Trp Pro Ala Ala Phe Pro Val  
 Page 2597

Phe Glu Pro His Trp Gln Ile Cys Met Ala Gly Gly Leu Ser Thr Gly  
 260 265 270  
 Trp Ile Glu Trp Gly Gly Glu Arg Phe Glu Phe Arg Asp Ala Pro Ser  
 275 280 285  
 Tyr Ser Glu Lys Asn Trp Gly Gly Gly Phe Pro Arg Lys Trp Phe Trp  
 290 295 300  
 Val Gln Cys Asn Val Phe Glu Gly Ala Thr Gly Glu Val Ala Leu Thr  
 305 310 315  
 Ala Gly Gly Gly Leu Arg Gln Leu Pro Gly Leu Thr Glu Thr Tyr Glu  
 325 330 335  
 Asn Ala Ala Leu Val Cys Val His Tyr Asp Gly Lys Met Tyr Glu Phe  
 340 345 350  
 Val Pro Trp Asn Gly Val Val Arg Trp Glu Met Ser Pro Trp Gly Tyr  
 355 360 365  
 Trp Tyr Ile Thr Ala Glu Asn Glu Asn His Val Val Glu Leu Glu Ala  
 370 375 380  
 Arg Thr Asn Glu Ala Gly Thr Pro Leu Arg Ala Pro Thr Thr Glu Val  
 385 390 395 400  
 Gly Leu Ala Thr Ala Cys Arg Asp Ser Cys Tyr Gly Glu Leu Lys Leu  
 405 410 415  
 Gln Ile Trp Glu Arg Leu Tyr Asp Gly Ser Lys Gly Lys Val Ile Leu  
 420 425 430  
 Glu Thr Lys Ser Ser Met Ala Ala Val Glu Ile Gly Gly Gly Pro Trp  
 435 440 445  
 Phe Gly Thr Trp Lys Gly Asp Thr Ser Asn Thr Pro Glu Leu Leu Lys  
 450 455 460  
 Gln Ala Leu Gln Val Pro Leu Asp Leu Glu Ser Ala Leu Gly Leu Val  
 465 470 475 480  
 Pro Phe Phe Lys Pro Pro Gly Leu  
 485

&lt;210&gt; 1743

&lt;211&gt; 975

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1743

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atgggtagca agatgttggt tagtttgaca agtcctcgac ttttctccgc cgtttctcgc    60
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cagctcagcc ctggaaaaac gatttctttg agaagaagag tcttcttggt gcctgctaaa    180
gccacaacag agcaatcagg tccagtagga ggagacaacg tcgatagcaa tgttttgccc    240
tatttgtagc tcaacaaggc tgagaagaaa acaattgggt aaatggaaca agagtttctc    300
caagcgttgc aatctttcta ttatgatggc aaagcgatca tgtctaata agagtttgat    360
aaccttaaa aagagttaat gtggaagga agcagtggtg tgatgctaag ttccgatgaa    420
caaagattct tggaagcttc catggcctat gtttctggaa atccaatctt gaatgatgaa    480
gaatatgata agctcaaac caaactaaag attgatggtg gcgacattgt gagcgagggt    540
ccaagatgca gtcctcgtag taaaaaggtg tatagtgtac tcgctgtaga ttatttcaaa    600
atgttattgt tgaatgttcc agcaaccgtt gttgctctcg gactcttttt cttcttgga    660
gacattacag gttttgagat cacatacatc atggagcttc cagaaccata cagtttcata    720
ttcacttggt tcgctgctgt gcctgtgatt gtatatctgg ctttatcaat caccaaattg    780
atcatcaagg acttcttgat cttgaagggt ccttgtccga atttggaac ggaaaacacc    840
tccttctttg gaacaattct gtcaatctcc agcggcggca aaaccaacac tgtcaaatgc    900
accaactgcg gaaccgcgat ggtgtatgac tcgggttcta ggttgatcac attgccagaa    960
ggaagccaag ctttaa

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&lt;210&gt; 1744

&lt;211&gt; 324

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1744

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Met Gly Ser Lys Met Leu Phe Ser Leu Thr Ser Pro Arg Leu Phe Ser
1           5           10          15

```

```

Ala Val Ser Arg Lys Pro Ser Ser Ser Phe Ser Pro Ser Pro Pro Ser
Page 2599

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Pro Ser Ser Arg Thr Gln Trp Thr Gln Leu Ser Pro Gly Lys Ser Ile  
35 40  
Ser Leu Arg Arg Arg Val Phe Leu Leu Pro Ala Lys Ala Thr Thr Glu  
50 55 60  
Gln Ser Gly Pro Val Gly Gly Asp Asn Val Asp Ser Asn Val Leu Pro  
65 70 75 80  
Tyr Cys Ser Ile Asn Lys Ala Glu Lys Lys Thr Ile Gly Glu Met Glu  
85 90 95  
Gln Glu Phe Leu Gln Ala Leu Gln Ser Phe Tyr Tyr Asp Gly Lys Ala  
100 105 110  
Ile Met Ser Asn Glu Glu Phe Asp Asn Leu Lys Glu Glu Leu Met Trp  
115 120 125  
Glu Gly Ser Ser Val Val Met Leu Ser Ser Asp Glu Gln Arg Phe Leu  
130 135 140  
Glu Ala Ser Met Ala Tyr Val Ser Gly Asn Pro Ile Leu Asn Asp Glu  
145 150 155 160  
Glu Tyr Asp Lys Leu Lys Leu Lys Leu Lys Ile Asp Gly Ser Asp Ile  
165 170 175  
Val Ser Glu Gly Pro Arg Cys Ser Leu Arg Ser Lys Lys Val Tyr Ser  
180 185 190  
Asp Leu Ala Val Asp Tyr Phe Lys Met Leu Leu Leu Asn Val Pro Ala  
195 200 205  
Thr Val Val Ala Leu Gly Leu Phe Phe Phe Leu Asp Asp Ile Thr Gly  
210 215 220  
Phe Glu Ile Thr Tyr Ile Met Glu Leu Pro Glu Pro Tyr Ser Phe Ile  
225 230 235 240  
Phe Thr Trp Phe Ala Ala Val Pro Val Ile Val Tyr Leu Ala Leu Ser  
245 250 255  
Ile Thr Lys Leu Ile Ile Lys Asp Phe Leu Ile Leu Lys Gly Pro Cys  
260 265 270

Pro Asn Cys Gly Thr Glu Asn Thr Ser Phe Phe Gly Thr Ile Leu Ser  
 275 280 285

Ile Ser Ser Gly Gly Lys Thr Asn Thr Val Lys Cys Thr Asn Cys Gly  
 290 295 300

Thr Ala Met Val Tyr Asp Ser Gly Ser Arg Leu Ile Thr Leu Pro Glu  
 305 310 315 320

Gly Ser Gln Ala

<210> 1745

<211> 618

<212> DNA

<213> Arabidopsis thaliana

<400> 1745  
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 aaccgcgcg atctagctca agccgccata aaaatcagcc tctccacgc tcaaagcgcc 240  
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<210> 1746

<211> 205

<212> PRT

<213> Arabidopsis thaliana

<400> 1746

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 Page 2601

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Ile Val His Ser Ser Cys Glu His Ala Ser Tyr Pro Ser Leu Cys Val  
35 40 45  
Arg Thr Leu Ser Ser Tyr Ser Gly Pro Thr Ile Thr Asn Arg Arg Asp  
50 55 60  
Leu Ala Gln Ala Ala Ile Lys Ile Ser Leu Ser His Ala Gln Ser Ala  
65 70 75 80  
Ala Lys Lys Leu Ala Val Val Arg Asp Ser Val Gly Lys Lys Lys Gln  
85 90 95  
Glu Lys Ala Ala Leu Val Asp Cys Val Glu Met Ile Gly Asp Ser Val  
100 105 110  
Asp Glu Leu Ser Arg Thr Leu Gly Val Leu Lys His Leu Arg Val Ser  
115 120 125  
Gly Gly Ser Ala Lys Glu Phe Arg Trp Gln Met Ser Asn Ala Gln Thr  
130 135 140  
Trp Ala Ser Ala Ala Leu Thr Asp Asp Asp Thr Cys Leu Asp Gly Phe  
145 150 155 160  
Gln Gly Met Asp Asp Gly Glu Ile Lys Thr Glu Val Lys Gln Trp Met  
165 170 175  
Thr Lys Val Ala Arg Val Thr Ser Asn Ala Leu Tyr Met Val Asn Gln  
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Leu Asp Glu Thr Arg Gly Lys Pro His Asp Val His Leu  
195 200 205

<210> 1747

<211> 978

<212> DNA

<213> Arabidopsis thaliana

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Page 2602



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<210> 1748

<211> 325

<212> PRT

<213> Arabidopsis thaliana

<400> 1748

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Ser Lys 35 Cys Pro Lys Ala Glu 40 Glu Ile Val Arg Gly 45 Val Thr Val Gln
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Tyr Val 50 Ser Arg Gln Lys 55 Thr Leu Ala Ala Lys 60 Leu Leu Arg Met His
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Phe His Asp Cys Phe Val Arg Gly Cys Asp Gly Ser Val Leu Leu Lys
Page 2603
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65                      70                      75                      80  
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 Lys Gly Tyr Glu Val Val Asp Ala Ala Lys Thr Ala Leu Glu Arg Lys  
                                  100                                   105  
 Cys Pro Asn Leu Ile Ser Cys Ala Asp Val Leu Ala Leu Val Ala Arg  
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 Asp Ala Val Ala Val Ile Gly Gly Pro Trp Trp Pro Val Pro Leu Gly  
                                  130                                   135                                   140  
 Arg Arg Asp Gly Arg Ile Ser Lys Leu Asn Asp Ala Leu Leu Asn Leu  
                                  145                                   150                                   155                                   160  
 Pro Ser Pro Phe Ala Asp Ile Lys Thr Leu Lys Lys Asn Phe Ala Asn  
                                  165                                   170                                   175  
 Lys Gly Leu Asn Ala Lys Asp Leu Val Val Leu Ser Gly Gly His Thr  
                                  180                                   185                                   190  
 Ile Gly Ile Ser Ser Cys Ala Leu Val Asn Ser Arg Leu Tyr Asn Phe  
                                  195                                   200                                   205  
 Thr Gly Lys Gly Asp Ser Asp Pro Ser Met Asn Pro Ser Tyr Val Arg  
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                                  225                                   230                                   235                                   240  
 Met Asp Pro Gly Ser Ala Leu Thr Phe Asp Thr His Tyr Phe Lys Val  
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 Val Ala Gln Lys Lys Gly Leu Phe Thr Ser Asp Ser Thr Leu Leu Asp  
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 Asp Ile Glu Thr Lys Asn Tyr Val Gln Thr Gln Ala Ile Leu Pro Pro  
                                  275                                   280                                   285  
 Val Phe Ser Ser Phe Asn Lys Asp Phe Ser Asp Ser Met Val Lys Leu  
                                  290                                   295                                   300  
 Gly Phe Val Gln Ile Leu Thr Gly Lys Asn Gly Glu Ile Arg Lys Arg  
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Cys Ala Phe Pro Asn  
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<210> 1749

<211> 1401

<212> DNA

<213> *Arabidopsis thaliana*

<400> 1749

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tcccaagaaa gcttcttgaa gagattcaat ggtggattgg ctcttctaac ttctgttcta      180
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gacaatcctt tggttattgc cgggtggagt gctgcattgg ctgttcattt tgttctgtct      360
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aagttgggta ctgatgataa tgctcagttg cttgacataa gagctactgc tgatttcaga      480
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1401

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<210> 1750

<211> 466

<212> PRT

<213> Arabidopsis thaliana

<400> 1750

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20 25 30

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35 40 45

Phe Asn Gly Gly Leu Ala Leu Leu Thr Ser Val Leu Ser Ser Ala Thr  
50 55 60

Ala Pro Ala Lys Ser Leu Thr Tyr Glu Glu Ala Leu Gln Gln Ser Met  
65 70 75 80

Thr Thr Ser Ser Ser Phe Asp Ser Asp Gly Leu Ile Glu Gly Ile Ser  
85 90 95

Asn Phe Val Thr Asp Asn Pro Leu Val Ile Ala Gly Gly Val Ala Ala  
100 105 110

Leu Ala Val Pro Phe Val Leu Ser Gln Val Leu Asn Lys Lys Pro Lys  
115 120 125

Ser Trp Gly Val Glu Ser Ala Lys Asn Ala Tyr Thr Lys Leu Gly Thr  
130 135 140

Asp Asp Asn Ala Gln Leu Leu Asp Ile Arg Ala Thr Ala Asp Phe Arg  
145 150 155 160

Gln Val Gly Ser Pro Asn Ile Lys Gly Leu Gly Lys Lys Ala Val Ser  
165 170 175

Thr Val Tyr Asn Gly Glu Asp Lys Pro Gly Phe Leu Lys Lys Leu Ser  
180 185 190

Leu Lys Phe Lys Asp Pro Glu Asn Thr Thr Leu Tyr Ile Leu Asp Lys  
195 200 205

047-E2F-PCT.ST25.txt

Phe Asp Gly Asn Ser Glu Leu Val Ala Glu Leu Val Ala Leu Asn Gly  
 210 215 220  
 Phe Lys Ser Ala Tyr Ala Ile Lys Asp Gly Ala Glu Gly Pro Arg Gly  
 225 230 235 240  
 Trp Leu Asn Ser Ser Leu Pro Trp Ile Glu Pro Lys Lys Thr Leu Ser  
 245 250 255  
 Leu Asp Leu Ser Ser Leu Thr Asp Ser Ile Ser Gly Val Phe Gly Glu  
 260 265 270  
 Ser Ser Asp Gly Val Ser Val Ala Leu Gly Val Ala Ala Ala Ala Gly  
 275 280 285  
 Leu Ser Val Phe Ala Phe Thr Glu Ile Glu Thr Ile Leu Gln Leu Leu  
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 Gly Ser Ala Ala Leu Val Gln Leu Ala Gly Lys Lys Leu Leu Phe Ala  
 305 310 315  
 Glu Asp Arg Lys Gln Thr Leu Lys Gln Val Asp Glu Phe Leu Asn Thr  
 325 330 335  
 Lys Val Ala Pro Lys Glu Leu Val Asp Glu Leu Lys Glu Ile Gly Lys  
 340 345 350  
 Ala Leu Leu Pro Gln Ser Thr Ser Asn Lys Ala Leu Pro Ala Pro Ala  
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 385 390 395 400  
 Val Asp Lys Pro Val Pro Glu Pro Glu Pro Val Pro Glu Pro Val Pro  
 405 410 415  
 Val Pro Ala Ile Glu Ala Ala Val Ala Ala Gln Val Ile Thr Glu Pro  
 420 425 430  
 Thr Glu Thr Glu Ala Lys Pro Lys Pro His Ser Arg Pro Leu Ser Pro  
 435 440 445  
 Tyr Ala Ser Tyr Pro Asp Leu Lys Pro Pro Ser Ser Pro Met Pro Ser  
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 Page 2607

450

455

460

Gln Pro  
465

&lt;210&gt; 1751

&lt;211&gt; 321

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1751

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caattgaaga acgaagctac gagaatttcc aaagatgttg tggatatgct tctgaaaaat	300
gtgaccacag tgaacaactg a	321

&lt;210&gt; 1752

&lt;211&gt; 106

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1752

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			20					25					30		

Gln	Ala	Lys	Glu	Glu	Ala	Glu	Thr	Glu	Val	Ala	Glu	His	Lys	Thr	Ser
		35					40					45			

Thr	Glu	Gln	Gly	Phe	Gln	Arg	Lys	Leu	Glu	Ala	Thr	Ser	Gly	Asp	Ser
	50					55					60				

Gly	Ala	Asn	Val	Lys	Arg	Leu	Glu	Gln	Glu	Thr	Asp	Ala	Lys	Ile	Glu
65					70					75					80

Gln Leu Lys Asn Glu Ala Thr Arg Ile Ser Lys Asp Val Val Asp Met  
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Leu Leu Lys Asn Val Thr Thr Val Asn Asn  
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<210> 1753

<211> 1236

<212> DNA

<213> *Arabidopsis thaliana*

<400> 1753

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<210> 1754

&lt;211&gt; 411

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1754

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 20 25 30

Phe Ser Val Ile Val Pro Arg Arg Arg Cys Leu Arg Leu Val Thr Ser  
 35 40 45

Cys Val Ser Thr Val Gln Ser Ser Val Ala Thr Asn Gly Ser Ser Pro  
 50 55 60

Ala Pro Ala Pro Ala Ala Val Val Val Glu Arg Asp Gln Ile Arg Leu  
 65 70 75 80

Gly Leu Pro Ser Lys Gly Arg Met Ala Ala Asp Ala Ile Asp Leu Leu  
 85 90 95

Lys Asp Cys Gln Leu Phe Val Lys Gln Val Asn Pro Arg Gln Tyr Val  
 100 105 110

Ala Gln Ile Pro Gln Leu Pro Asn Thr Glu Val Trp Phe Gln Arg Pro  
 115 120 125

Lys Asp Ile Val Arg Lys Leu Leu Ser Gly Asp Leu Asp Leu Gly Ile  
 130 135 140

Val Gly Leu Asp Thr Leu Ser Glu Tyr Gly Gln Glu Asn Glu Asp Leu  
 145 150 155 160

Ile Ile Val His Glu Ala Leu Asn Phe Gly Asp Cys His Leu Ser Ile  
 165 170 175

Ala Ile Pro Asn Tyr Gly Ile Phe Glu Asn Ile Asn Ser Leu Lys Glu  
 180 185 190

Leu Ala Gln Met Pro Gln Trp Ser Glu Glu Arg Pro Leu Arg Leu Ala  
 195 200 205



Thr Gly Phe Thr Tyr Leu Gly Pro Lys Phe Met Lys Glu Asn Gly Ile  
 210 215 220

Lys His Val Val Phe Ser Thr Ala Asp Gly Ala Leu Glu Ala Ala Pro  
 225 230 235 240

Ala Met Gly Ile Ala Asp Ala Ile Leu Asp Leu Val Ser Ser Gly Ile  
 245 250 255

Thr Leu Lys Glu Asn Asn Leu Lys Glu Ile Glu Gly Gly Val Val Leu  
 260 265 270

Glu Ser Gln Ala Ala Leu Val Ala Ser Arg Arg Ala Leu Asn Glu Arg  
 275 280 285

Lys Gly Ala Leu Asn Thr Val His Glu Ile Leu Glu Arg Leu Glu Ala  
 290 295 300

His Leu Lys Ala Asp Gly Gln Phe Thr Val Val Ala Asn Met Arg Gly  
 305 310 315 320

Asn Ser Ala Gln Glu Val Ala Glu Arg Val Leu Ser Gln Pro Ser Leu  
 325 330 335

Ser Gly Leu Gln Gly Pro Thr Ile Ser Pro Val Tyr Cys Thr Gln Asn  
 340 345 350

Gly Lys Val Ser Val Asp Tyr Tyr Ala Ile Val Ile Cys Val Pro Lys  
 355 360 365

Lys Ala Leu Tyr Asp Ser Val Lys Gln Leu Arg Ala Ala Gly Gly Ser  
 370 375 380

Gly Val Leu Val Ser Pro Leu Thr Tyr Ile Phe Asp Glu Asp Thr Pro  
 385 390 395 400

Arg Trp Gly Gln Leu Leu Arg Asn Leu Gly Ile  
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<210> 1755

<211> 465

<212> DNA

<213> *Arabidopsis thaliana*

<400> 1755

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 caacaagaac agagcaaagg gactggtgtg ttcattcccta aatcgtctca gcctagaaga 240  
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 tctcttctatc aaaacagaca agagtatcag caaaatcatg agaactcaag aagtactctc 360  
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<210> 1756

<211> 154

<212> PRT

<213> Arabidopsis thaliana

<400> 1756

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Pro Val Ser Leu Ser Ser Ser Ser Ser Leu Ser Phe Gln Gly Leu  
 35 40 45

Phe Arg Gly Gly Tyr Gln Thr Ala Pro Tyr Met Tyr Gln Gln Glu Gln  
 50 55 60

Ser Lys Gly Thr Gly Val Phe Ile Pro Lys Ser Ser Gln Pro Arg Arg  
 65 70 75 80

Arg Pro His His His Gln Lys Gln Gly Arg Tyr Ser Ser Phe Asn Ala  
 85 90 95

Lys Gln Gln His Ser Leu His Gln Asn Arg Gln Glu Tyr Gln Gln Asn  
 100 105 110

His Glu Asn Ser Arg Ser Thr Leu Thr Thr His Asn Asn Asn Asn  
 115 120 125

Lys Ser Asn Met Asn Ser Thr Ser Val His Ala Ser Ile Pro Arg Arg  
 130 135 140

Ser Tyr Arg Asp Ala Ser Ser Ile Tyr Thr  
 145 150

<210> 1757

<211> 1311

<212> DNA

<213> *Arabidopsis thaliana*

<400> 1757

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gtttcaactt ttggagaatc acatggagga ggagttgggt gtatcattga tggttgtcct      240
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<210> 1758

&lt;211&gt; 436

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1758

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 20 25 30

Ala Val Gln Ile Ser Leu Arg Thr Gln Thr Arg Lys Asn Phe Gln Ile  
 35 40 45

Gln Ala Thr Gly Ser Ser Tyr Gly Thr His Phe Arg Val Ser Thr Phe  
 50 55 60

Gly Glu Ser His Gly Gly Gly Val Gly Cys Ile Ile Asp Gly Cys Pro  
 65 70 75 80

Pro Arg Ile Pro Leu Thr Glu Ser Asp Leu Gln Phe Asp Leu Asp Arg  
 85 90 95

Arg Arg Pro Gly Gln Ser Arg Ile Thr Thr Pro Arg Lys Glu Thr Asp  
 100 105 110

Thr Cys Arg Ile Ser Ser Gly Val Ser Glu Gly Met Thr Thr Gly Thr  
 115 120 125

Pro Ile His Val Phe Val Pro Asn Thr Asp Gln Arg Gly Leu Asp Tyr  
 130 135 140

Ser Glu Met Ser Val Ala Tyr Arg Pro Ser His Ala Asp Ala Thr Tyr  
 145 150 155 160

Asp Met Lys Tyr Gly Val Arg Ser Val Gln Gly Gly Gly Arg Ser Ser  
 165 170 175

Ala Arg Glu Thr Ile Gly Arg Val Ala Pro Gly Ala Leu Ala Lys Lys  
 180 185 190

Ile Leu Lys Gln Phe Ala Gly Thr Glu Ile Leu Ala Tyr Val Ser Gln  
 195 200 205

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Val His His Val Val Leu Pro Glu Glu Leu Val Asp His Glu Asn Leu  
210 215 220

Thr Leu Glu Gln Ile Glu Asn Asn Ile Val Arg Cys Pro Asn Pro Glu  
225 230 235 240

Tyr Ala Glu Lys Met Ile Ala Ala Ile Asp Ala Val Arg Thr Lys Gly  
245 250 255

Asn Ser Val Gly Gly Val Val Thr Cys Ile Val Arg Asn Ala Pro Arg  
260 265 270

Gly Leu Gly Thr Pro Val Phe Asp Lys Leu Glu Ala Glu Leu Ala Lys  
275 280 285

Ala Cys Met Ser Leu Pro Ala Thr Lys Gly Phe Glu Phe Gly Ser Gly  
290 295 300

Phe Ala Gly Thr Phe Leu Thr Gly Leu Glu His Asn Asp Glu Phe Tyr  
305 310 315 320

Thr Asp Glu Asn Gly Arg Ile Arg Thr Arg Thr Asn Arg Ser Gly Gly  
325 330 335

Ile Gln Gly Gly Ile Ser Asn Gly Glu Ile Ile Asn Met Arg Val Ala  
340 345 350

Phe Lys Pro Thr Ser Thr Ile Gly Arg Lys Gln Asn Thr Val Thr Arg  
355 360 365

Asp Lys Val Glu Thr Glu Met Ile Ala Arg Gly Arg His Asp Pro Cys  
370 375 380

Val Val Pro Arg Ala Val Pro Met Val Glu Ala Met Val Ala Leu Val  
385 390 395 400

Leu Val Asp Gln Leu Met Ala Gln Tyr Ala Gln Cys His Leu Phe Pro  
405 410 415

Ile Asn Pro Glu Leu Gln Glu Pro Leu Gln Ile Glu Gln Pro Gln Asn  
420 425 430

Ala Thr Ala Leu  
435

<210> 1759

<211> 804

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1759

```

atggctcctc atggagatgg attaagtgc atcgaagaac ctgaggtcga tgcctaactcg      60
gagattcttc gaccgatctc ctccagtcgc ttctgcatcg ctatgcaagc ggaggctctt      120
cctttgggtca acaagttcgg actctctgaa actactgatt cgccgcttgg taaaggattg      180
ccctgggttc tgtatcacgg cgtgcataaa gatcttcgaa tcaatgtagt ttgccccgga      240
agagatgcag ctttagggat cgatagtgtt ggaactgttc cagcttctct cataactttt      300
gcttcacatc aagcattaaa acctgacatc ataatcaatg ccggaacctg cggtggtctc      360
aaggatcaaa gagccaacat aggcgatgta ttcttctgat ctgatgttgt gtttcatgat      420
agaagaatac caattccgat gtttgatctg tatggagttg gtctccgta ggcattctcg      480
acaccaatc tctcaagga actcaattg aagattggca ggttatctac tggtgactcg      540
ttggatatgt ccacgaaga tgaacattg atcattgcca atgatgtac gctaaggac      600
atggagggtg ctgccgtggc gtatgtggct gatcttctga aaataccagt cgtgttcctc      660
aaagccgtga ccgatctagt ggacggagat aaacctacag cagaagagtt cttgcagaac      720
ttgacagttg tgaccgctgc attagaggga actgctacta aagtgatcaa cttcatcaat      780
gggagaaacc tttcggacct ttaa                                         804

```

&lt;210&gt; 1760

&lt;211&gt; 267

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1760

```

Met Ala Pro His Gly Asp Gly Leu Ser Asp Ile Glu Glu Pro Glu Val
1           5           10           15

```

```

Asp Ala Gln Ser Glu Ile Leu Arg Pro Ile Ser Ser Val Val Phe Val
20           25           30

```

```

Ile Ala Met Gln Ala Glu Ala Leu Pro Leu Val Asn Lys Phe Gly Leu
35           40           45

```

```

Ser Glu Thr Thr Asp Ser Pro Leu Gly Lys Gly Leu Pro Trp Val Leu
50           55           60

```

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Tyr His Gly Val His Lys Asp Leu Arg Ile Asn Val Val Cys Pro Gly  
 65 70 75 80  
 Arg Asp Ala Ala Leu Gly Ile Asp Ser Val Gly Thr Val Pro Ala Ser  
 85 90 95  
 Leu Ile Thr Phe Ala Ser Ile Gln Ala Leu Lys Pro Asp Ile Ile Ile  
 100 105 110  
 Asn Ala Gly Thr Cys Gly Gly Phe Lys Val Lys Gly Ala Asn Ile Gly  
 115 120 125  
 Asp Val Phe Leu Val Ser Asp Val Val Phe His Asp Arg Arg Ile Pro  
 130 135 140  
 Ile Pro Met Phe Asp Leu Tyr Gly Val Gly Leu Arg Gln Ala Phe Ser  
 145 150 155 160  
 Thr Pro Asn Leu Leu Lys Glu Leu Asn Leu Lys Ile Gly Arg Leu Ser  
 165 170 175  
 Thr Gly Asp Ser Leu Asp Met Ser Thr Gln Asp Glu Thr Leu Ile Ile  
 180 185 190  
 Ala Asn Asp Ala Thr Leu Lys Asp Met Glu Gly Ala Ala Val Ala Tyr  
 195 200 205  
 Val Ala Asp Leu Leu Lys Ile Pro Val Val Phe Leu Lys Ala Val Thr  
 210 215 220  
 Asp Leu Val Asp Gly Asp Lys Pro Thr Ala Glu Phe Leu Gln Asn  
 225 230 235 240  
 Leu Thr Val Val Thr Ala Ala Leu Glu Gly Thr Ala Thr Lys Val Ile  
 245 250 255  
 Asn Phe Ile Asn Gly Arg Asn Leu Ser Asp Leu  
 260 265

<210> 1761

<211> 1143

<212> DNA

<213> Arabidopsis thaliana

<400> 1761  
 atgcttgtag cgccctgaata cacttacctt gttggaccga tctcattctc tggtccttat 60  
 tgtcaagcta acattgtggt ccagcttgat ggtacgatta tagctccaac ggattcaaaag 120  
 acatggggaa aaggggttaat gtgggtgatt gattttacaa agctgaaagg aattaaagta 180  
 caagggaaag gtgtttattga tggaaagggc tctggttggt ggcaacaaga ttctcctttc 240  
 attgatagtg ataccaaact catcgtccct ttgaacaatt ctgctaacca aaacctcctt 300  
 atgccgatca gaagtgaagt tgatgagaga atgccaagca ttaaaccaac ggcattgaga 360  
 ttctctggga gttttgggtg ggaagtgaag ggtataacga taaaaacag tcctcagtgt 420  
 cacctcaaat tcgacgactg cgtaggggtt gtgggtgcatg acatagccgt ttcttcacct 480  
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 agcactactc tcgcttgccg agatgactgt atctcgatcc aaacgggttg ctcgaacgtg 600  
 tttgtgcaca atgtgaactg tggaccgggt cacgggatca gcattgtag tctcggcaaa 660  
 gaggggtacaa aagcctgcgt ctgcaacata acagtacgag acgtagctat gcacaacaca 720  
 atgacagggt tccgaatcaa gacatggcaa ggaggagtag gatcagtgaaggaggataatc 780  
 ttctcaaaac ttcagctcaa ccaagtacaa attccaataa cgataaacca attctactgt 840  
 gaccatagca aatgaagaa ccaaacatca gcagtagcag tggaggaggt gacttacgag 900  
 aggataaaaag gaacttatac cgtgaaaccg gtgcatttcg cttgtagcga taactccccg 960  
 tgtgtagatg tgcagttatc gtcgatagag cttaaacagg ttcaagaaaa gtatcgaatg 1020  
 tatgatgctt attgctggca gacatttggt gagctcaaca ctctactctt tcctccatt 1080  
 gattgtttga agattgggaa gcccccgaga aacaaagtgc agtccgatca cgatgtgtgt 1140  
 taa 1143

<210> 1762

<211> 380

<212> PRT

<213> Arabidopsis thaliana

<400> 1762

Met Leu Val Pro Pro Glu Tyr Thr Tyr Leu Val Gly Pro Ile Ser Phe  
 1 5 10 15

Ser Gly Pro Tyr Cys Gln Ala Asn Ile Val Phe Gln Leu Asp Gly Thr  
 20 25 30



## 047-E2F-PCT.ST25.txt

Ile Ile Ala Pro Thr Asp Ser Lys Thr Trp Gly Lys Gly Leu Met Trp  
 35 40 45  
 Trp Ile Asp Phe Thr Lys Leu Lys Gly Ile Lys Val Gln Gly Lys Gly  
 50 55 60  
 Val Ile Asp Gly Arg Gly Ser Gly Trp Trp Gln Gln Asp Ser Pro Phe  
 65 70 75 80  
 Ile Asp Ser Asp Thr Lys Leu Ile Val Pro Leu Asn Asn Ser Ala Asn  
 85 90 95  
 Gln Asn Pro Pro Met Pro Ile Arg Ser Glu Leu Asp Glu Arg Met Pro  
 100 105 110  
 Ser Ile Lys Pro Thr Ala Leu Arg Phe Ser Gly Ser Phe Gly Val Glu  
 115 120 125  
 Val Thr Gly Ile Thr Ile Gln Asn Ser Pro Gln Cys His Leu Lys Phe  
 130 135 140  
 Asp Asp Cys Val Gly Val Val Val His Asp Ile Ala Val Ser Ser Pro  
 145 150 155 160  
 Gly Asp Ser Pro Asn Thr Asp Gly Ile His Leu Gln Asn Thr Lys Asp  
 165 170 175  
 Val Leu Ile His Ser Thr Thr Leu Ala Cys Gly Asp Asp Cys Ile Ser  
 180 185 190  
 Ile Gln Thr Gly Cys Ser Asn Val Phe Val His Asn Val Asn Cys Gly  
 195 200 205  
 Pro Gly His Gly Ile Ser Ile Gly Ser Leu Gly Lys Glu Gly Thr Lys  
 210 215 220  
 Ala Cys Val Ser Asn Ile Thr Val Arg Asp Val Ala Met His Asn Thr  
 225 230 235 240  
 Met Thr Gly Val Arg Ile Lys Thr Trp Gln Gly Gly Val Gly Ser Val  
 245 250 255  
 Lys Gly Ile Ile Phe Ser Asn Ile Gln Leu Asn Gln Val Gln Ile Pro  
 260 265 270  
 Ile Thr Ile Asn Gln Phe Tyr Cys Asp His Ser Lys Cys Lys Asn Gln  
 275 280 285

047-E2F-PCT.ST25.txt

Thr Ser Ala Val Ala Val Glu Gly Val Thr Tyr Glu Arg Ile Lys Gly  
290 295 300

Thr Tyr Thr Val Lys Pro Val His Phe Ala Cys Ser Asp Asn Phe Pro  
305 310 315 320

Cys Val Asp Val Gln Leu Ser Ser Ile Glu Leu Lys Pro Val Gln Glu  
325 330 335

Lys Tyr Arg Met Tyr Asp Ala Tyr Cys Trp Gln Thr Phe Gly Glu Leu  
340 345 350

Asn Thr Pro Thr Leu Pro Pro Ile Asp Cys Leu Lys Ile Gly Lys Pro  
355 360 365

Pro Arg Asn Lys Val Gln Ser Asp His Asp Val Cys  
370 375 380

<210> 1763

<211> 666

<212> DNA

<213> Arabidopsis thaliana

<400> 1763  
atggcgaatt ccggcgaaga gaagttgaag ctctactctt actggagaag ctcgtgtgct 60  
catcgtgtcc gtatcgccct cgctttgaaa gggcttgatt atgagtatat accagtgaat 120  
ttgctcaagg gtgatcaatt cgattcagat ttcaagaaga tcaatccaat gggaactgta 180  
ccagctctgg tggatggaga tgttgtgatt aatgattctt ttgcgataat aatgtatctg 240  
gatgagaagt accctgagcc acctttgtta cctcgtgacc tccataaacg agctgtgaat 300  
taccaggcaa tgagtattgt ctgtctggc atacagcctc atcaaaatct ggctgttatt 360  
aggatatatcg aggaaaagat aaatgtggag gagaagactg cctggggttaa taatgctatc 420  
acaaaaggat ttacagctct cgagaaactg ttggtgaatt gcgctgggaa acatcgact 480  
ggatgatgaaa tttacctggc tgatctcttt ctacaccac agatccacgg agcaatcaac 540  
agattccaga ttaacatgga accgtaccca actcttgcaa aatgttacga atcatacaac 600  
gaactgcctg cgtttcaaaa tgcaactacc gaaaagcagc cagatgctcc ttcttcacc 660  
atctga 666

<210> 1764

&lt;211&gt; 221

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1764

Met Ala Asn Ser Gly Glu Glu Lys Leu Lys Leu Tyr Ser Tyr Trp Arg  
 1 5 10 15

Ser Ser Cys Ala His Arg Val Arg Ile Ala Leu Ala Leu Lys Gly Leu  
 20 25 30

Asp Tyr Glu Tyr Ile Pro Val Asn Leu Leu Lys Gly Asp Gln Phe Asp  
 35 40 45

Ser Asp Phe Lys Lys Ile Asn Pro Met Gly Thr Val Pro Ala Leu Val  
 50 55 60

Asp Gly Asp Val Val Ile Asn Asp Ser Phe Ala Ile Ile Met Tyr Leu  
 65 70 75 80

Asp Glu Lys Tyr Pro Glu Pro Pro Leu Leu Pro Arg Asp Leu His Lys  
 85 90 95

Arg Ala Val Asn Tyr Gln Ala Met Ser Ile Val Leu Ser Gly Ile Gln  
 100 105 110

Pro His Gln Asn Leu Ala Val Ile Arg Tyr Ile Glu Glu Lys Ile Asn  
 115 120 125

Val Glu Glu Lys Thr Ala Trp Val Asn Asn Ala Ile Thr Lys Gly Phe  
 130 135 140

Thr Ala Leu Glu Lys Leu Leu Val Asn Cys Ala Gly Lys His Ala Thr  
 145 150 155 160

Gly Asp Glu Ile Tyr Leu Ala Asp Leu Phe Leu Ala Pro Gln Ile His  
 165 170 175

Gly Ala Ile Asn Arg Phe Gln Ile Asn Met Glu Pro Tyr Pro Thr Leu  
 180 185 190

Ala Lys Cys Tyr Glu Ser Tyr Asn Glu Leu Pro Ala Phe Gln Asn Ala  
 195 200 205

Leu Pro Glu Lys Gln Pro Asp Ala Pro Ser Ser Thr Ile

210

215

<210> 1765  
 <211> 711  
 <212> DNA  
 <213> Arabidopsis thaliana

<400> 1765  
 atggcaggag aggcagaggc ttggccacg acggcaccgt tagctccggt caccagtcag 60  
 cgaaaagtac ggaacgattt ggaggaaaca ttacaaaaac catacatggc aagagcatta 120  
 gcagctccag atacagagca tccgaatgga acagaaggctc acgatagcaa aggaatgagt 180  
 gttatgcaac aacatgttgc ttcttcgac caaaacgacg atggaatcgt ctatccttgg 240  
 gagaactata agggatttcg tgaccttggt ttcaacccaa ttctctctat cttttggacc 300  
 ttactcataa acttagcggt cagctacgtt acacttcga gttgggtgcc atcaccatta 360  
 ttgccggttt atatcgacaa catacaciaa gccaaagcatg ggagtgttc gaggacatat 420  
 gacaccgaag gaaggtatgt cccagttaac ctgcagaaca tatttagcaa atacgcgcta 480  
 acggttaaag ataagtatc atttaagag gtttggaatg taaccgaggg aaatcgaatg 540  
 gcaatcgatc cttttggatg gctttcaaac aaagttgaat ggatactact ctatatcttt 600  
 gctaaggacg aagatgggtt cctatctaaa gaagctgtga gaggttgctt tgatggaagt 660  
 ttatttgaac aaattgccaa agagagggcc aattctcgca aacaagacta a 711

<210> 1766  
 <211> 236  
 <212> PRT  
 <213> Arabidopsis thaliana

<400> 1766  
 Met Ala Gly Glu Ala Glu Ala Leu Ala Thr Thr Ala Pro Leu Ala Pro  
 1 5 10 15  
 Val Thr Ser Gln Arg Lys Val Arg Asn Asp Leu Glu Glu Thr Leu Pro  
 20 25 30  
 Lys Pro Tyr Met Ala Arg Ala Leu Ala Ala Pro Asp Thr Glu His Pro  
 35 40 45

Asn Gly Thr Glu Gly His Asp Ser Lys Gly Met Ser Val Met Gln Gln  
 50 55 60

His Val Ala Phe Phe Asp Gln Asn Asp Asp Gly Ile Val Tyr Pro Trp  
 65 70 75 80

Glu Thr Tyr Lys Gly Phe Arg Asp Leu Gly Phe Asn Pro Ile Ser Ser  
 85 90 95

Ile Phe Trp Thr Leu Leu Ile Asn Leu Ala Phe Ser Tyr Val Thr Leu  
 100 105 110

Pro Ser Trp Val Pro Ser Pro Leu Leu Pro Val Tyr Ile Asp Asn Ile  
 115 120 125

His Lys Ala Lys His Gly Ser Asp Ser Ser Thr Tyr Asp Thr Glu Gly  
 130 135 140

Arg Tyr Val Pro Val Asn Leu Glu Asn Ile Phe Ser Lys Tyr Ala Leu  
 145 150 155 160

Thr Val Lys Asp Lys Leu Ser Phe Lys Glu Val Trp Asn Val Thr Glu  
 165 170 175

Gly Asn Arg Met Ala Ile Asp Pro Phe Gly Trp Leu Ser Asn Lys Val  
 180 185 190

Glu Trp Ile Leu Leu Tyr Ile Leu Ala Lys Asp Glu Asp Gly Phe Leu  
 195 200 205

Ser Lys Glu Ala Val Arg Gly Cys Phe Asp Gly Ser Leu Phe Glu Gln  
 210 215 220

Ile Ala Lys Glu Arg Ala Asn Ser Arg Lys Gln Asp  
 225 230 235

<210> 1767

<211> 753

<212> DNA

<213> Arabidopsis thaliana

<400> 1767  
 atggcggcta ttgctagtct gcaagcagtt aatctcacat ttaggcgacg tagcactcga 60  
 tgtggaattg ctgagccgag cggagagcca gctccgatgg ggctgaagac tagatacgag 120

```

gatgggctgg tggagagagt gttcatgggt ctcttcgcga ggaagatgga caagttcggg 180
tcgaagaaga agaaggacac gaaggagaag ggtttttggg agtacgatta cgagagcttc 240
gtggagggtg caaagagagt gatgcaggga cggtcagag tgcagcagca agaggccgtg 300
agggagggtc ttctctctat gctgcctcct ggtgctcctg aacagtttag gaaattgttc 360
ccaccaacga aatgggctgc agagttcaat gccgctctta cagtgccttt ctttcactgg 420
ttggttggtc catctcaggt catagaagtg gaagtgaatg gtgtgaaaca gagaagtgga 480
gttcgtatca agaaatgcag gtatctggag aacagtggtg gtgtaggaat gtgtgtgaat 540
atgtgaaga ttccaaccca agatttcttc accaatgagt ttggcctccc actcaccatg 600
aacccaaatt atgaagacat gagctgcgag atgatatacg ggcaagcacc tccgaccttt 660
gaggaggatg tagccaccaa gcaaccttgt ctacagata tatgttctat gtcgaatcca 720
agctccccaa tctgccttaa actagaggca tga 753

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&lt;210&gt; 1768

&lt;211&gt; 250

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1768

```

Met Ala Ala Ile Ala Ser Leu Gln Ala Val Asn Leu Thr Phe Arg Arg
1      5      10

```

```

Arg Ser Thr Arg Cys Gly Ile Ala Glu Pro Ser Gly Glu Pro Ala Pro
20      25      30

```

```

Met Gly Leu Lys Thr Arg Tyr Glu Asp Gly Leu Val Glu Arg Val Phe
35      40      45

```

```

Met Gly Leu Phe Ala Arg Lys Met Asp Lys Phe Gly Ser Lys Lys Lys
50      55      60

```

```

Lys Asp Thr Lys Glu Lys Gly Phe Trp Glu Tyr Asp Tyr Glu Ser Phe
65      70      75      80

```

```

Val Glu Val Ser Lys Arg Val Met Gln Gly Arg Ser Arg Val Gln Gln
85      90      95

```

```

Gln Glu Ala Val Arg Glu Val Leu Leu Ser Met Leu Pro Pro Gly Ala
100     105     110

```

Pro Glu Gln Phe Arg Lys Leu Phe Pro Pro Thr Lys Trp Ala Ala Glu  
 115 120 125

Phe Asn Ala Ala Leu Thr Val Pro Phe Phe His Trp Leu Val Gly Pro  
 130 135 140

Ser Gln Val Ile Glu Val Glu Val Asn Gly Val Lys Gln Arg Ser Gly  
 145 150 155 160

Val Arg Ile Lys Lys Cys Arg Tyr Leu Glu Asn Ser Gly Cys Val Gly  
 165 170 175

Met Cys Val Asn Met Cys Lys Ile Pro Thr Gln Asp Phe Phe Thr Asn  
 180 185 190

Glu Phe Gly Leu Pro Leu Thr Met Asn Pro Asn Tyr Glu Asp Met Ser  
 195 200 205

Cys Glu Met Ile Tyr Gly Gln Ala Pro Pro Ala Phe Glu Glu Asp Val  
 210 215 220

Ala Thr Lys Gln Pro Cys Leu Ala Asp Ile Cys Ser Met Ser Asn Pro  
 225 230 235 240

Ser Ser Pro Ile Cys Pro Lys Leu Glu Ala  
 245 250

<210> 1769

<211> 510

<212> DNA

<213> Arabidopsis thaliana

<400> 1769

atggcggcctt ctttatcagag cagacttata aaaggaatcg ctaatctcaa agctgttcgt	60
tctagcagat tgacgtctgc atcagctctac caaaatggga tgatgagatt ttccctcaaca	120
gtgccaagtg attcagatac acatgatgat ttcaagccta cacaaaaagt ccttcccgat	180
tctacggact cacttaaaga tatcgttgag aatgatgtga aggataatcc tgttatgatc	240
tacatgaaag gtgtccctga atctcctcag tgtgggttta gctcactagc cgtcagagtt	300
ttgcagcaat ataagtctc tatcagttct agaaacattc tagaagacca agagttgaaa	360
aacgctgtga aatccttcag cactggcct acgtttccac agatcttcat taaggagag	420
ttcattggcg gctcagacat catccttaac atgcacaagg aaggtgaatt ggagcagaag	480

cttaaagacg tctccggaaa ccaagattga

510

&lt;210&gt; 1770

&lt;211&gt; 169

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1770

Met Ala Ala Ser Leu Ser Ser Arg Leu Ile Lys Gly Ile Ala Asn Leu  
1 5 10 15Lys Ala Val Arg Ser Ser Arg Leu Thr Ser Ala Ser Val Tyr Gln Asn  
20 25 30Gly Met Met Arg Phe Ser Ser Thr Val Pro Ser Asp Ser Asp Thr His  
35 40 45Asp Asp Phe Lys Pro Thr Gln Lys Val Pro Pro Asp Ser Thr Asp Ser  
50 55 60Leu Lys Asp Ile Val Glu Asn Asp Val Lys Asp Asn Pro Val Met Ile  
65 70 75 80Tyr Met Lys Gly Val Pro Glu Ser Pro Gln Cys Gly Phe Ser Ser Leu  
85 90 95Ala Val Arg Val Leu Gln Gln Tyr Asn Val Pro Ile Ser Ser Arg Asn  
100 105 110Ile Leu Glu Asp Gln Glu Leu Lys Asn Ala Val Lys Ser Phe Ser His  
115 120 125Trp Pro Thr Phe Pro Gln Ile Phe Ile Lys Gly Glu Phe Ile Gly Gly  
130 135 140Ser Asp Ile Ile Leu Asn Met His Lys Glu Gly Glu Leu Glu Gln Lys  
145 150 155 160Leu Lys Asp Val Ser Gly Asn Gln Asp  
165

&lt;210&gt; 1771

&lt;211&gt; 741



&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

```

<400> 1771
atgggagagg tgaagttaga cgacgatgcg attcttaaat ccttcctcgc cgaggtcggg    60
gaagttgaga gagataacga agtcggcagg attctctcat gcttcaagct gaatccgttt    120
gagcatctta acctctcttt cgattcttcc acggatgatg ttaaaaggca gtacagaaa    180
atttctttga tggttcatcc tgataaatgc aaacatccac aagcacagga ggctttcggg    240
gcattggcaa aagcgcaaca actgctgcta aacgaccaag aaagagatta tattcttacc    300
caagtccatg ctgcaaaaga agagcttaag atgaagagaa agaaacagtt aaagaaagac    360
accgcctcta aaataaagtc cttgggtgat gagggaaagc atgagcacat atatgagcaa    420
tctgaggagt ttcagaagga gctcaagtta aaggtccgag agatattaac agaccaagag    480
tggcgtagaa gaaaaatggc aatgagaata tcagaagaag aggggagact gaagaaggat    540
gaagcagaac aaaaggagat atggaagaaa aagcgtgagc atgaagaaca gtgggaagga    600
acaagagaaa aaagggatc aagctggaga gactttcaga aagcaggaaa gaaggccaaa    660
aaaggagaga cgcgacctcc aaaattgaag acagaggatc cgaacaaatc atacgtccaa    720
aggccgggtca agaaaggctg a                                     741

```

&lt;210&gt; 1772

&lt;211&gt; 246

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

```

<400> 1772
Met Gly Glu Val  Lys Val Asp Asp Asp Ala Ile Leu Lys Ser Phe Leu
1          5          10
Ala Glu Val  Gly Glu Val Glu Arg  Asp Asn Glu Val Gly Arg Ile Leu
20         25         30
Ser Cys Phe Lys Leu Asn Pro  Phe Glu His Leu Asn Leu Ser Phe Asp
35         40         45
Ser Ser Thr Asp Asp Val  Lys Arg Gln Tyr Arg Lys Ile Ser Leu Met
50         55         60
Val His Pro Asp Lys Cys Lys His Pro Gln Ala Gln Glu Ala Phe Gly

```

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Ala Leu Ala Lys Ala Gln Gln Leu Leu Leu Asn Asp Gln Glu Arg Asp  
85 90 95

Tyr Ile Leu Thr Gln Val His Ala Ala Lys Glu Glu Leu Lys Met Lys  
100 105 110

Arg Lys Lys Gln Leu Lys Lys Asp Thr Ala Ser Lys Ile Lys Ser Leu  
115 120 125

Val Asp Glu Gly Lys His Glu His Ile Tyr Glu Gln Ser Glu Glu Phe  
130 135 140

Gln Lys Glu Leu Lys Leu Lys Val Arg Glu Ile Leu Thr Asp Gln Glu  
145 150 155 160

Trp Arg Arg Arg Lys Met Ala Met Arg Ile Ser Glu Glu Glu Gly Arg  
165 170 175

Leu Lys Lys Asp Glu Ala Glu Gln Lys Glu Ile Trp Lys Lys Arg  
180 185 190

Glu His Glu Glu Gln Trp Glu Gly Thr Arg Glu Lys Arg Val Ser Ser  
195 200 205

Trp Arg Asp Phe Gln Lys Ala Gly Lys Lys Ala Lys Lys Gly Glu Thr  
210 215 220

Arg Pro Pro Lys Leu Lys Thr Glu Asp Pro Asn Lys Ser Tyr Val Gln  
225 230 235 240

Arg Pro Val Lys Lys Gly  
245

<210> 1773

<211> 537

<212> DNA

<213> Arabidopsis thaliana

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<400> 1773
atgaaacag caaggggaa agataaagtt aagaccacaa aggaagcctt gaagccagtt    60
gatgacagaa agtggggaaa gaggaaggca cggctgaga agcctactaa acgagagact    120
cgtaaagaga agaagqctaa aaaggaccca aacaaccmaa aaagagctcc tagtgccttc    180
```

## 047-E2F-PCT.ST25.txt

tttgtctttc tagaagattt tagggtcacg ttcaagaaaag aaaatccaaa tgtgaaggcc	240
gtctctgctg ttgggaaagc tggagggcag aaatggaagt caatgtctca agctgaaaaa	300
gctccatag aagagaaagc tgcaaaaagg aaagctgaat atgagaagca aatggatgca	360
tacaacaaaa acttggagga agggagtgat gaatctgaaa agtctagatc tgagataaat	420
gatgaagatg aagccagtgg ggaggaagaa ctattagaga aggaagcggc aggtgatgat	480
gaagaagaag aagaggaaga agatgacgat gatgatgacg acgaggaaga agactaa	537

&lt;210&gt; 1774

&lt;211&gt; 178

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1774

Met Lys Thr Ala	Lys Gly Lys Asp Lys Val Lys Thr Thr Lys Glu Ala
1	5 10 15

Leu Lys Pro Val	Asp Asp Arg Lys Val Gly Lys Arg Lys Ala Pro Ala
20	25 30

Glu Lys Pro Thr	Lys Arg Glu Thr Arg Lys Glu Lys Lys Ala Lys Lys
35	40 45

Asp Pro Asn Lys Pro Lys Arg Ala Pro Ser Ala Phe Phe Val Phe Leu
50 55 60

Glu Asp Phe Arg Val Thr Phe Lys Lys Glu Asn Pro Asn Val Lys Ala
65 70 75 80

Val Ser Ala Val Gly Lys Ala Gly Gly Gln Lys Trp Lys Ser Met Ser
85 90 95

Gln Ala Glu Lys Ala Pro Tyr Glu Glu Lys Ala Ala Lys Arg Lys Ala
100 105 110

Glu Tyr Glu Lys Gln Met Asp Ala Tyr Asn Lys Asn Leu Glu Glu Gly
115 120 125

Ser Asp Glu Ser Glu Lys Ser Arg Ser Glu Ile Asn Asp Glu Asp Glu
130 135 140

Ala Ser Gly Glu Glu Glu Leu Leu Glu Lys Glu Ala Ala Gly Asp Asp
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150

155

160

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 165 170 175

Glu Asp

&lt;210&gt; 1775

&lt;211&gt; 978

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1775

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gagagggcag atattgttgt ggatgtgctt gtcaagaacc cgaatccagt tcctatccct	300
ctcatcgatg tcaactacct ggtcgagagc gatggggagga aactgggttc tggtttgatc	360
ccggatgctg gaacactcaa ggctcatgga gaagaaactg tgaagatacc attgacgttg	420
atctatgatg acatcaagag cacttacaac gatatcaacc ccgggatgat cataccttac	480
agaatcaagg ttgatctgat tgtggatgtg ccagtattgg gaagactgac attgccgctg	540
gagaaatgtg gagagatccc aattccaaag aaacctgatg ttgatatcga gaagattaag	600
ttccagaagt tctctttgga ggaaccgtg gcgattctcc atgtgaggct tcagaacatg	660
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aatgtgccga tgacattccg accaaaggac tttggttctg cgctttggga tatgattcgt	840
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gacgacgatg aggaataa	978

&lt;210&gt; 1776

&lt;211&gt; 325

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1776

Met Ser Thr Ser Glu Asp Lys Pro Glu Ile Ile Ser Arg Val Val His  
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35 40 45Phe Ile His Asp Ile Gly Glu Lys Leu Glu Gly Thr Ile Gly Phe Gly  
50 55 60Lys Pro Thr Ala Asp Val Ser Ala Ile His Ile Pro Lys Ile Asn Leu  
65 70 75 80Glu Arg Ala Asp Ile Val Val Asp Val Leu Val Lys Asn Pro Asn Pro  
85 90 95Val Pro Ile Pro Leu Ile Asp Val Asn Tyr Leu Val Glu Ser Asp Gly  
100 105 110Arg Lys Leu Val Ser Gly Leu Ile Pro Asp Ala Gly Thr Leu Lys Ala  
115 120 125His Gly Glu Glu Thr Val Lys Ile Pro Leu Thr Leu Ile Tyr Asp Asp  
130 135 140Ile Lys Ser Thr Tyr Asn Asp Ile Asn Pro Gly Met Ile Ile Pro Tyr  
145 150 155 160Arg Ile Lys Val Asp Leu Ile Val Asp Val Pro Val Leu Gly Arg Leu  
165 170 175Thr Leu Pro Leu Glu Lys Cys Gly Glu Ile Pro Ile Pro Lys Lys Pro  
180 185 190Asp Val Asp Ile Glu Lys Ile Lys Phe Gln Lys Phe Ser Leu Glu Glu  
195 200 205Thr Val Ala Ile Leu His Val Arg Leu Gln Asn Met Asn Asp Phe Asp  
210 215 220Leu Gly Leu Asn Asp Leu Asp Cys Glu Val Trp Leu Cys Asp Val Ser  
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225                      230                      235                      240

Ile Gly Lys Ala Glu Ile Ala Asp Ser Ile Lys Leu Asp Lys Asn Gly  
245                      250                      255

Ser Gly Leu Ile Asn Val Pro Met Thr Phe Arg Pro Lys Asp Phe Gly  
260                      265                      270

Ser Ala Leu Trp Asp Met Ile Arg Gly Lys Gly Thr Gly Tyr Thr Ile  
275                      280                      285

Lys Gly Asn Ile Asp Val Asp Thr Pro Phe Gly Ala Met Lys Leu Pro  
290                      295                      300

Ile Ile Lys Glu Gly Gly Glu Thr Arg Leu Lys Lys Glu Asp Asp Asp  
305                      310                      315                      320

Asp Asp Asp Glu Glu  
325

<210> 1777

<211> 252

<212> DNA

<213> Arabidopsis thaliana

<400> 1777  
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gatcatcccg aggtagtaga aagaagaata catgagcatg agagaattct gagaatgaat 180  
tcaagagact atggccactc cagtccataa ccaaagctcg tgagacctcc tttcaagctt 240  
attcccaact ga 252

<210> 1778

<211> 83

<212> PRT

<213> Arabidopsis thaliana

<400> 1778

Met Gly Leu Leu Pro Leu Val Lys Lys Leu Gly Phe Ile Ile Phe Leu  
1                      5                      10                      15

Leu Val Ser Ala Ser Ala Phe Ala Leu Cys Ser Ala Gly Arg Ser Ser  
 20 25 30

Ile Leu Ile Tyr Ser Gln Glu Asp Asp His Pro Glu Val Val Glu Arg  
 35 40 45

Arg Ile His Glu His Glu Arg Ile Leu Arg Met Asn Ser Arg Asp Tyr  
 50 55 60

Gly His Ser Ser Pro Lys Pro Lys Leu Val Arg Pro Pro Phe Lys Leu  
 65 70 75 80

Ile Pro Asn

<210> 1779

<211> 981

<212> DNA

<213> Arabidopsis thaliana

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 gatcctgtcg gacctccacc accaccgatg atcagagtta gaatcaagta cggtgccgtc 180  
 taccatgaga tcaatattag tcctcaagct tcttttgggg agctaaagaa gatgttgact 240  
 ggaccaacgg gtattcatca tcaagatcag aagctaattg ataaagataa agagagggat 300  
 tcgaaggcgt tcctcgatgt ttccgggagt aaagataaat ctaagatggt gcttatagaa 360  
 gaccgcctta gccaaagaaa acggtttttg gagatgagga agattgctaa aaccgaaaag 420  
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 gcttttgaga tggtactaaa aaaaggaggg aagattgcgg agaaagatct tgtaacggtt 540  
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 aagttaaaa gaaagatgca ggtgaagaga gtgcagaatt atgtggaaac actcgatgcc 660  
 ttgaaggatg aaaactccat ggctaattgg caacagaaac agtcaagtac tgctcagaga 720  
 ctgcaccga ttcaagaaca taacaatgaa gagagacaag aacagaaacc gatacaatcg 780  
 ctcatggaca tgccgatata atacaagag aagaagcaag agattgaaga ggagcctagg 840  
 aattcagggg aaggaccatt tgtgttagat tcttctgcta aatgggaaac attcgatcat 900

catccccgtga cgccattgag ctgcactact gcgaaaaata acgcgatccc gccaggttt 960  
aattgggaat tctttgattg a 981

<210> 1780

<211> 326

<212> PRT

<213> Arabidopsis thaliana

<400> 1780

Met Thr Asn Gly Gly Arg Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly  
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Arg Glu Ser Gly Gly Arg Asp Leu Glu Ile Arg Pro Gly Gly Met Leu  
20 25 30

Val Gln Lys Arg Asn Pro Asp Leu Asp Pro Val Gly Pro Pro Pro Pro  
35 40 45

Pro Met Ile Arg Val Arg Ile Lys Tyr Gly Ala Val Tyr His Glu Ile  
50 55 60

Asn Ile Ser Pro Gln Ala Ser Phe Gly Glu Leu Lys Lys Met Leu Thr  
65 70 75 80

Gly Pro Thr Gly Ile His His Gln Asp Gln Lys Leu Met Tyr Lys Asp  
85 90 95

Lys Glu Arg Asp Ser Lys Ala Phe Leu Asp Val Ser Gly Val Lys Asp  
100 105 110

Lys Ser Lys Met Val Leu Ile Glu Asp Pro Leu Ser Gln Glu Lys Arg  
115 120 125

Phe Leu Glu Met Arg Lys Ile Ala Lys Thr Glu Lys Ala Ser Lys Ala  
130 135 140

Ile Ser Asp Ile Ser Leu Glu Val Asp Arg Leu Gly Gly Arg Val Ser  
145 150 155 160

Ala Phe Glu Met Val Thr Lys Lys Gly Gly Lys Ile Ala Glu Lys Asp  
165 170 175

Leu Val Thr Val Ile Glu Leu Leu Met Asn Glu Leu Ile Lys Leu Asp  
180 185 190



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Ala Ile Val Ala Glu Gly Asp Val Lys Leu Gln Arg Lys Met Gln Val  
195 200 205

Lys Arg Val Gln Asn Tyr Val Glu Thr Leu Asp Ala Leu Lys Val Lys  
210 215 220

Asn Ser Met Ala Asn Gly Gln Gln Lys Gln Ser Ser Thr Ala Gln Arg  
225 230 235 240

Leu Ala Pro Ile Gln Glu His Asn Asn Glu Glu Arg Gln Glu Gln Lys  
245 250 255

Pro Ile Gln Ser Leu Met Asp Met Pro Ile Gln Tyr Lys Glu Lys Lys  
260 265 270

Gln Glu Ile Glu Glu Glu Pro Arg Asn Ser Gly Glu Gly Pro Phe Val  
275 280 285

Leu Asp Ser Ser Ala Lys Trp Glu Thr Phe Asp His His Pro Val Thr  
290 295 300

Pro Leu Ser Ser Thr Thr Ala Lys Asn Asn Ala Ile Pro Pro Arg Phe  
305 310 315 320

Asn Trp Glu Phe Phe Asp  
325

<210> 1781

<211> 933

<212> DNA

<213> Arabidopsis thaliana

<400> 1781

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ctatccgatac ctgtcaaggg caaaaccgtc cagagtttca aagatctcgg cgtcacaata	180
ctacacggag atttgaatga tcacgagagc ttagtgaagg ctattaaaca ggttgatgtg	240
gtgatatcta ccgttgggag catgcaaata ttggatcaaa ccaagatcat ttccgccatc	300
aaagaagccg gtaatgtcaa gagattcttg ccgtctgagt ttgggggtgga tgtggatagg	360
acgagtgcgg ttgagccagc taaatcggtc ttgcaggga agatacatag caggagaacc	420

atcgaagcgg aaggaatacc atacacttac gctgttaccg gttgctttgg tggttactac 480  
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 aacaacactt tatcgatgaa cgaaatagtc accttgtggg agaaaaagat tggcaagtct 720  
 cttgagaaga ctacactccc agaggaacaa ctacttaaaa gcatccaaga gtctccgatt 780  
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<210> 1782

<211> 310

<212> PRT

<213> Arabidopsis thaliana

<400> 1782

Met Ala Thr Glu Lys Ser Lys Ile Leu val Ile Gly Gly Thr Gly Tyr  
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Ile Gly Lys Phe Leu val Glu Ala Ser Ala Lys Ala Gly His Ser Thr  
 20 25 30

Phe Ala Leu val Arg Glu Ala Thr Leu Ser Asp Pro val Lys Gly Lys  
 35 40 45

Thr val Gln Ser Phe Lys Asp Leu Gly val Thr Ile Leu His Gly Asp  
 50 55 60

Leu Asn Asp His Glu Ser Leu val Lys Ala Ile Lys Gln val Asp val  
 65 70 75 80

val Ile Ser Thr val Gly Ser Met Gln Ile Leu Asp Gln Thr Lys Ile  
 85 90 95

Ile Ser Ala Ile Lys Glu Ala Gly Asn val Lys Arg Phe Leu Pro Ser  
 100 105 110

Glu Phe Gly val Asp val Asp Arg Thr Ser Ala val Glu Pro Ala Lys  
 115 120 125

Ser Ala Phe Ala Gly Lys Ile Gln Ile Arg Arg Thr Ile Glu Ala Glu  
 130 135 140

Gly Ile Pro Tyr Thr Tyr Ala Val Thr Gly Cys Phe Gly Gly Tyr Tyr  
 145 150 155 160

Leu Pro Thr Leu Val Gln Phe Glu Pro Gly Leu Thr Ser Pro Pro Arg  
 165 170 175

Asp Lys Val Thr Ile Leu Gly Asp Gly Asn Ala Lys Ala Val Ile Asn  
 180 185 190

Lys Glu Glu Asp Ile Ala Ala Tyr Thr Ile Lys Ala Val Asp Asp Pro  
 195 200 205

Arg Thr Leu Asn Lys Ile Leu Tyr Ile Lys Pro Ser Asn Asn Thr Leu  
 210 215 220

Ser Met Asn Glu Ile Val Thr Leu Trp Glu Lys Lys Ile Gly Lys Ser  
 225 230 235 240

Leu Glu Lys Thr His Leu Pro Glu Glu Gln Leu Leu Lys Ser Ile Gln  
 245 250 255

Glu Ser Pro Ile Pro Ile Asn Val Val Leu Ser Ile Asn His Ala Val  
 260 265 270

Phe Val Asn Gly Asp Thr Asn Ile Ser Ile Glu Pro Ser Phe Gly Val  
 275 280 285

Glu Ala Ser Glu Leu Tyr Pro Asp Val Lys Tyr Thr Ser Val Asp Glu  
 290 295 300

Tyr Leu Ser Tyr Phe Ala  
 305 310

<210> 1783

<211> 1797

<212> DNA

<213> Arabidopsis thaliana

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 aattttggca acaggtttcag catcaacacc agaattcaca gattccatga tcgctcccaa 120

atcgtaatcc	ctagggctca	atcttcttct	tctccgtctc	catctccacc	ctccgacaag	180
aagaagacca	aaacccgacc	cggaaccata	accactaagg	agagcgaaga	gacggttgcg	240
aagaagctcg	acgtttgctcc	gccttcgcct	caatcaccac	cgtctccgcc	tacactgaag	300
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attactgcag	accttacgcg	ggttgatcac	ttgggtgttt	ataacctcac	caaggctttt	780
caggattaca	ataacagact	agcgcaatta	agggcgggta	aaagcagcaa	aagcaagctt	840
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cgagctctga	tattttgatca	aggaaacaga	atttctcagg	gcattagttg	cgcggtatgtg	1620
gctgatataat	gtgtcaaggc	actgcacgat	tcaaccgcca	gaaacaaaag	ctttgatgtt	1680
tgccatgaat	acgtttgctga	gcaaggaata	gaactctatg	agctgggtggc	tcatttgcca	1740
gacaaggcga	acaactatct	gactccggct	ttatctgtac	ttgagaagaa	cacatga	1797

&lt;210&gt; 1784

&lt;211&gt; 598

&lt;212&gt; PR

<213> *Arabidopsis thaliana*

&lt;400&gt; 1784

Met Val Gly Ser Ile Val Gly Ser Asn Met Ala Ala Thr Asp Ala Arg  
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 20 25 30  
 His Arg Phe His Asp Arg Ser Gln Ile Val Ile Pro Arg Ala Gln Ser  
 35 40 45  
 Ser Ser Ser Pro Ser Pro Ser Pro Ser Asp Lys Lys Lys Thr Lys  
 50 55 60  
 Thr Arg Pro Gly Thr Ile Thr Thr Lys Glu Ser Glu Glu Thr Val Ala  
 65 70 75 80  
 Lys Lys Leu Asp Val Ala Pro Pro Ser Pro Gln Ser Pro Pro Ser Pro  
 85 90 95  
 Pro Thr Leu Lys Leu Asp Asp Val Asn Pro Val Gly Leu Gly Arg Arg  
 100 105 110  
 Ser Arg Gln Ile Phe Asp Glu Val Trp Arg Lys Phe Ser Gly Leu Gly  
 115 120 125  
 Gln Met Ser Arg Thr Thr Arg Pro Asp Glu Gln Glu Thr Leu Asp Ser  
 130 135 140  
 Leu Leu Ile Arg Glu Gly Pro Met Cys Glu Phe Ala Val Pro Gly Ala  
 145 150 155 160  
 Gln Asn Val Thr Val Leu Val Val Gly Ala Thr Ser Arg Ile Gly Arg  
 165 170 175  
 Ile Val Val Arg Lys Leu Met Leu Arg Gly Tyr Thr Val Lys Ala Leu  
 180 185 190  
 Val Arg Lys Gln Asp Glu Glu Val Met Ser Met Leu Pro Arg Ser Val  
 195 200 205  
 Asp Ile Val Val Gly Asp Val Gly Glu Pro Ser Thr Leu Lys Ser Ala  
 210 215 220  
 Val Glu Ser Cys Ser Lys Ile Ile Tyr Cys Ala Thr Ala Arg Ser Thr  
 225 230 235 240 245 250 255 260 265 270 275 280 285 290 295 300 305 310 315 320 325 330 335 340 345 350 355 360 365 370 375 380 385 390 395 400

225 230 240  
Ile Thr Ala Asp Leu Thr Arg Val Asp His Leu Gly Val Tyr Asn Leu  
245 250 255  
Thr Lys Ala Phe Gln Asp Tyr Asn Asn Arg Leu Ala Gln Leu Arg Ala  
260 265 270  
Gly Lys Ser Ser Lys Ser Lys Leu Leu Ala Lys Phe Lys Ser Ala  
275 280 285  
Glu Ser Leu Asp Gly Trp Glu Ile Arg Gln Gly Thr Tyr Phe Gln Asp  
290 295 300  
Thr Thr Ala Ser Lys Tyr Asp Gly Gly Met Asp Ala Lys Phe Glu Phe  
305 310 315 320  
Thr Glu Thr Glu Arg Ala Glu Phe Ser Gly Tyr Val Phe Thr Arg Gly  
325 330 335  
Gly Tyr Val Glu Leu Ser Lys Lys Leu Ser Leu Pro Leu Gly Thr Thr  
340 345 350  
Leu Asp Arg Tyr Glu Gly Leu Val Leu Ser Val Gly Gly Asn Gly Arg  
355 360 365  
Ser Tyr Val Val Ile Leu Glu Ala Gly Pro Ser Ser Asp Met Ser Gln  
370 375 380  
Ser Lys Gln Tyr Phe Ala Arg Ile Ser Thr Lys Ala Gly Phe Cys Arg  
385 390 395 400  
Val Arg Val Pro Phe Ser Ala Phe Arg Pro Val Asn Pro Glu Asp Pro  
405 410 415  
Pro Leu Asp Pro Phe Leu Val His Thr Leu Thr Ile Arg Phe Glu Pro  
420 425 430  
Lys Arg Gln Arg Pro Val Asp Gly Leu Ala Gly Ala Gln Gln Asp Leu  
435 440 445  
Arg Ser Phe Ser Leu Val Phe Glu Tyr Ile Lys Ala Leu Pro Ala Gly  
450 455 460  
Gln Glu Thr Asp Phe Ile Leu Val Ser Cys Thr Gly Ser Gly Val Glu  
465 470 475 480

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Ala Asn Arg Arg Glu Gln Val Leu Lys Ala Lys Arg Ala Gly Glu Asp  
 485 490 495

Ser Leu Arg Arg Ser Gly Leu Gly Tyr Thr Ile Ile Arg Pro Gly Pro  
 500 505 510

Leu Lys Glu Glu Pro Gly Gly Gln Arg Ala Leu Ile Phe Asp Gln Gly  
 515 520 525

Asn Arg Ile Ser Gln Gly Ile Ser Cys Ala Asp Val Ala Asp Ile Cys  
 530 535 540

Val Lys Ala Leu His Asp Ser Thr Ala Arg Asn Lys Ser Phe Asp Val  
 545 550 555 560

Cys His Glu Tyr Val Ala Glu Gln Gly Ile Glu Leu Tyr Glu Leu Val  
 565 570 575

Ala His Leu Pro Asp Lys Ala Asn Asn Tyr Leu Thr Pro Ala Leu Ser  
 580 585 590

Val Leu Glu Lys Asn Thr  
 595

<210> 1785

<211> 810

<212> DNA

<213> Arabidopsis thaliana

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 gagaaagcat ctttcaaga aaagagtagt gtagccaaaa tgggtgggac aatagtttca 180  
 ctagtgtggc cacttgtggt agttctctac catggtccac gagtcttcac cccatcttct 240  
 ccaccatttc cacaactccg tcagcttctt ttgccgttat catctctaaa ctcggattgg 300  
 atcatcggtg gttgtctttt agccatcaaa gacaccctgc ttctgtgtgc ttttattctt 360  
 caagcacata taatgaagtt atatccagca ccattcacgg tctctttctt ctattttctg 420  
 attgcttcaa tcttgacgtc attgatcgga atcgtagcag aaaagaacaa tccgagcata 480  
 tggatcattc attttgacat tacattagtt tgcatagttg ttgggggaat atttaatcca 540  
 ggatattacg cgattcatct gtgggcagta cgtaataaag gacctgttta ctagctata 600

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ttttacctag gaagtttggg cggaggggatt ttgatatcgt tagggtttta cactgtgatg 720
tggggaaaag caaaagaagg gaagactcag ttcttgtcgc tgtcagagga aactcctctt 780
ctagacgaaa acatagacga ccgaatatag 810

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&lt;210&gt; 1786

&lt;211&gt; 269

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1786

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Met Ser Thr Tyr Leu Ile Thr Gly Phe Ile Gly Ile Glu Tyr Ser Asn
1      5      10
Pro Thr Leu Ala Ser Ala Ile Ser Asn Ile Asn Pro Ala Ile Thr Phe
20     25     30
Ile Leu Ala Ile Ile Phe Arg Met Glu Lys Ala Ser Phe Lys Glu Lys
35     40     45
Ser Ser Val Ala Lys Met Val Gly Thr Ile Val Ser Leu Val Gly Ala
50     55     60
Leu Val Val Val Leu Tyr His Gly Pro Arg Val Phe Thr Pro Ser Ser
65     70     75     80
Pro Pro Phe Pro Gln Leu Arg Gln Leu Leu Leu Pro Leu Ser Ser Ser
85     90     95
Asn Ser Asp Trp Ile Ile Gly Gly Cys Leu Leu Ala Ile Lys Asp Thr
100    105    110
Leu Val Pro Val Ala Phe Ile Leu Gln Ala His Ile Met Lys Leu Tyr
115    120    125
Pro Ala Pro Phe Thr Val Ser Phe Phe Tyr Phe Leu Ile Ala Ser Ile
130    135    140
Leu Thr Ser Leu Ile Gly Ile Val Ala Glu Lys Asn Asn Pro Ser Ile
145    150    155    160
Trp Ile Ile His Phe Asp Ile Thr Leu Val Cys Ile Val Val Gly Gly
165    170    175

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Ile Phe Asn Pro Gly Tyr Tyr Ala Ile His Leu Trp Ala Val Arg Asn  
180 185 190

Lys Gly Pro Val Tyr Leu Ala Ile Phe Arg Pro Leu Ser Ile Leu Ile  
195 200 205

Ala Val Ile Met Gly Ala Ile Phe Leu Gly Asp Ser Phe Tyr Leu Gly  
210 215 220

Ser Leu Val Gly Gly Ile Leu Ile Ser Leu Gly Phe Tyr Thr Val Met  
225 230 235 240

Trp Gly Lys Ala Lys Glu Gly Lys Thr Gln Phe Leu Ser Leu Ser Glu  
245 250 255

Glu Thr Pro Leu Leu Asp Glu Asn Ile Asp Asp Arg Ile  
260 265

<210> 1787

<211> 309

<212> DNA

<213> Arabidopsis thaliana

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tatgagctcg acgagatcaa cataggaagg gagatagagc aagcattggc tcagctcgga 180  
tgcagcccgga ccgttccggt ggtgttcatt ggagggcagc ttgttggtgg agccaatcaa 240  
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<210> 1788

<211> 102

<212> PRT

<213> Arabidopsis thaliana

<400> 1788

Met Glu Asn Leu Gln Lys Met Ile Ser Glu Lys Ser Val Val Ile Phe  
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1 5 10 15  
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 20 25 30  
 Asp Phe Gly Val Asn Pro Thr Ile Tyr Glu Leu Asp Glu Ile Asn Ile  
 35 40 45  
 Gly Arg Glu Ile Glu Gln Ala Leu Ala Gln Leu Gly Cys Ser Pro Thr  
 50 55 60  
 Val Pro Val Val Phe Ile Gly Gly Gln Leu Val Gly Gly Ala Asn Gln  
 65 70 75 80  
 Val Met Ser Leu His Leu Asn Arg Ser Leu Val Pro Met Leu Lys Arg  
 85 90 95  
 Ala Gly Ala Leu Trp Leu  
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<210> 1789

<211> 930

<212> DNA

<213> Arabidopsis thaliana

<400> 1789  
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 attgtgattc caaacagaca caacgagaag ctgggttggtc tgcttcattga aactggttct 240  
 acagacatcg tagtcttggt ccatggcttt cgatcaaaaca agagtaacca aataatgaat 300  
 aatgtggctg ctgctataca gaaagaaggg atcagcgctt ttcgttttga tttctccggg 360  
 aatggagaga gtgaaggcga tttctattat ggtaactata accatgaagc tgatgattta 420  
 cattctgttg tccaataact ctctaacaag aaccgtgtgg ttctataat cctcgggtcac 480  
 agtaaggagg gtgatgttgt ctcctcttac gcctccaagt atcatgatgt ccgcaatgta 540  
 atcaatctct cgggacgtta tgatcttaaa aagggtataa gagagcgtct tggagaagat 600  
 tttttggaaa gaattaagca acaaggattc atcgatgttg gagatggaaa atcgggggtat 660  
 cgtgttactg agaagagctt aatggacagg ttaagcactg atattcatga agcttcgctc 720  
 aagattgaca aagagtgcag ggtcttgacg gttcatggat cggaggacga ggtaatacct 780

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 ggagctaatc atggttatac tgagcaccaa agtcaattag tttaacacgt tatggagttc 900  
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<210> 1790

<211> 309

<212> PRT

<213> Arabidopsis thaliana

<400> 1790

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Tyr Tyr Lys Thr<sub>20</sub> Ser Pro Phe Pro Thr<sub>25</sub> Ser Ser Phe Phe Asn<sub>30</sub> Val Arg

Phe Pro Ile<sub>35</sub> Lys Asn Asn Gln<sub>40</sub> Ile Ser Cys Asn Lys<sub>45</sub> Ala Lys Asn Leu

Arg Met<sub>50</sub> Asp Pro Ser Lys Gly<sub>55</sub> Ile Gln Glu Gln Arg<sub>60</sub> Ile Val Ile Pro

Asn Arg His Asn Glu<sub>70</sub> Lys Leu Val Gly Leu<sub>75</sub> Leu His Glu Thr Gly<sub>80</sub> Ser

Thr Asp Ile Val<sub>85</sub> Val Leu Cys His Gly<sub>90</sub> Phe Arg Ser Asn Lys<sub>95</sub> Ser Asn

Gln Ile Met<sub>100</sub> Asn Val Ala Ala<sub>105</sub> Ala Ile Gln Lys Glu Gly<sub>110</sub> Ile Ser

Ala Phe Arg<sub>115</sub> Phe Asp Phe Ser Gly<sub>120</sub> Asn Gly Glu Ser<sub>125</sub> Glu Gly Ser Phe

Tyr Tyr Gly Asn Tyr Asn<sub>135</sub> His Glu Ala Asp Asp<sub>140</sub> Leu His Ser Val Val

Gln Tyr Phe Ser Asn<sub>150</sub> Lys Asn Arg Val Val<sub>155</sub> Pro Ile Ile Leu Gly<sub>160</sub> His

Ser Lys Gly Gly<sub>165</sub> Asp Val Val Leu Leu Tyr<sub>170</sub> Ala Ser Lys Tyr<sub>175</sub> His Asp

047-E2F-PCT.ST25.txt

Val Arg Asn Val Ile Asn Leu Ser Gly Arg Tyr Asp Leu Lys Lys Gly  
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Ile Arg Glu Arg Leu Gly Glu Asp Phe Leu Glu Arg Ile Lys Gln Gln  
 195 200 205

Gly Phe Ile Asp Val Gly Asp Gly Lys Ser Gly Tyr Arg Val Thr Glu  
 210 215 220

Lys Ser Leu Met Asp Arg Leu Ser Thr Asp Ile His Glu Ala Cys Leu  
 225 230 235 240

Lys Ile Asp Lys Glu Cys Arg Val Leu Thr Val His Gly Ser Glu Asp  
 245 250 255

Glu Val Ile Pro Val Glu Asp Ala Lys Glu Phe Ala Lys Ile Ile Pro  
 260 265 270

Asn His Lys Leu Glu Ile Val Glu Gly Ala Asn His Gly Tyr Thr Glu  
 275 280 285

His Gln Ser Gln Leu Val Ser Thr Val Met Glu Phe Ile Lys Thr Val  
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Ile Val Lys Asn Asn  
 305

<210> 1791

<211> 2292

<212> DNA

<213> Arabidopsis thaliana

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 gcgaaagatg aggatatggc tgagccagac aatatggaga tagatgctca gattaagaaa 180  
 gatgatgaaa aagctgagac ggaagataaa gagtcagagg ttaagaaaaa tgaagacaat 240  
 gctgagactc aaaaaatgga agagaaggtt gaggtcacca aagatgaggg acaagcagag 300  
 gctaccaaca tggatgaaga tgccgatgga aagaaagagc aaactgatga tgggtgttca 360  
 gtggaagata ctgtaatgaa ggaaaacgtg gaatctaaag acaataacta tgccaaagat 420  
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gaagaaaata	aaacaaagga	agttgaggcg	gcaaaggctg	aggtggatga	gtcaaaggta	720
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&lt;210&gt; 1792

&lt;211&gt; 763

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1792

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Gly Gly Lys Glu Thr Gln Glu Leu Ala Lys Asp Glu Asp Met Ala Glu  
 35 40 45

Pro Asp Asn Met Glu Ile Asp Ala Gln Ile Lys Lys Asp Asp Glu Lys  
 50 55 60

Ala Glu Thr Glu Asp Lys Glu Ser Glu Val Lys Lys Asn Glu Asp Asn  
 65 70 75 80

Ala Glu Thr Gln Lys Met Glu Glu Lys Val Glu Val Thr Lys Asp Glu  
 85 90 95

Gly Gln Ala Glu Ala Thr Asn Met Asp Glu Asp Ala Asp Gly Lys Lys  
 100 105 110

Glu Gln Thr Asp Asp Gly Val Ser Val Glu Asp Thr Val Met Lys Glu  
 115 120 125

Asn Val Glu Ser Lys Asp Asn Asn Tyr Ala Lys Asp Asp Glu Lys Glu  
 130 135 140

Thr Lys Glu Thr Asp Ile Thr Glu Ala Asp His Lys Lys Ala Gly Lys  
 145 150 155 160

Glu Asp Ile Gln His Glu Ala Asp Lys Ala Asn Gly Thr Lys Asp Gly  
 165 170 175

Asn Thr Gly Asp Ile Lys Glu Glu Gly Thr Leu Val Asp Glu Asp Lys  
 180 185 190

Gly Thr Asp Met Asp Glu Lys Val Glu Asn Gly Asp Glu Asn Lys Gln  
 195 200 205

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Val Glu Asn Val Glu Gly Lys Glu Lys Glu Asp Lys Glu Glu Asn Lys  
210 215 220

Thr Lys Glu Val Glu Ala Ala Lys Ala Glu Val Asp Glu Ser Lys Val  
225 230 235 240

Glu Asp Glu Lys Glu Gly Ser Glu Asp Glu Asn Asp Asn Glu Lys Val  
245 250 255

Glu Ser Lys Asp Ala Lys Glu Asp Glu Lys Glu Glu Thr Asn Asp Asp  
260 265 270

Lys Glu Asp Glu Lys Glu Glu Ser Lys Gly Ser Lys Lys Arg Gly Lys  
275 280 285

Gly Thr Ser Ser Gly Gly Lys Val Arg Glu Lys Asn Lys Thr Glu Glu  
290 295 300

Val Lys Lys Asp Ala Glu Pro Arg Thr Pro Phe Ser Asp Arg Pro Val  
305 310 315 320

Arg Glu Arg Lys Ser Val Glu Arg Leu Val Ala Leu Ile Asp Lys Asp  
325 330 335

Ser Ser Lys Glu Phe Arg Val Glu Lys Gly Arg Gly Ala Tyr Leu Lys  
340 345 350

Asp Ile Pro Asn Val Ala Asn Lys Val Met Arg Lys Arg Ser Asp Glu  
355 360 365

Thr Leu Lys Leu Leu His Pro Ile Leu Phe Gly Gly Arg Arg Gly Lys  
370 375 380

Ala Ala Gln Ile Lys Thr Asn Ile Leu Gly Phe Ser Gly Phe Val Trp  
385 390 395 400

His Gly Asp Glu Lys Lys Ala Lys Glu Lys Val Lys Glu Lys Leu Glu  
405 410 415

Lys Cys Thr Lys Glu Lys Leu Trp Glu Phe Cys Asp Val Leu Asp Ile  
420 425 430

His Ile Thr Lys Ala Thr Thr Lys Lys Glu Asp Ile Ile Thr Lys Leu  
435 440 445

Phe Glu Phe Leu Glu Lys Pro His Val Thr Gly Asp Val Thr Gly Asp  
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450

455

Thr Thr Val Ser Glu Lys Glu Lys Ser Ser Lys Gly Ala Lys Arg Lys  
465 470 475 480

Arg Thr Pro Lys Lys Thr Ser Pro Thr Ala Gly Ser Ser Ser Ser Lys  
485 490 495

Arg Ser Ala Lys Ser Gln Lys Lys Ser Glu Glu Ala Thr Lys Val Val  
500 505 510

Lys Lys Ser Leu Ala His Ser Asp Asp Glu Ser Glu Glu Lys Glu  
515 520 525

Glu Glu Glu Lys Gln Glu Glu Glu Lys Ala Glu Glu Lys Glu Glu Lys  
530 535 540

Lys Glu Glu Glu Asn Glu Asn Gly Ile Pro Asp Lys Ser Glu Asp Glu  
545 550 555 560

Ala Pro Gln Pro Ser Glu Ser Glu Glu Lys Asp Glu Ser Glu Glu His  
565 570 575

Ser Glu Glu Glu Thr Thr Lys Lys Lys Arg Gly Ser Arg Leu Ser Ala  
580 585 590

Gly Lys Lys Glu Ser Ala Gly Arg Ala Arg Asn Lys Lys Ala Val Val  
595 600 605

Ala Ala Lys Ser Ser Pro Pro Glu Lys Ile Thr Gln Lys Arg Ser Ser  
610 615 620

Ala Lys Arg Lys Lys Thr Asp Asp Asp Ser Asp Thr Ser Pro Lys Ala  
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Ser Ser Lys Arg Lys Lys Ser Glu Asn Pro Ile Lys Ala Ser Pro Ala  
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Pro Ser Lys Ser Ala Ser Lys Glu Lys Pro Val Lys Arg Ala Gly Lys  
660 665 670

Gly Lys Asp Lys Pro Ser Asp Lys Val Leu Lys Asn Ala Ile Val Glu  
675 680 685

Ile Leu Lys Arg Val Asp Phe Ser Thr Ala Thr Phe Thr Asp Ile Leu  
690 695 700



Lys Glu Leu Ala Lys Glu Phe Thr Glu Asp Leu Thr Pro Arg Lys Ser  
 705 710 715 720

Ser Ile Lys Met Ile Ile Gln Glu Glu Leu Thr Lys Leu Ala Asp Glu  
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 755 760

<210> 1793

<211> 3054

<212> DNA

<213> Arabidopsis thaliana

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3054

&lt;210&gt; 1794

&lt;211&gt; 1017

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1794

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35 40 45Lys Glu Asp Gly Asp Glu Gly Phe Lys Arg Glu Glu Glu Ala Glu  
50 55 60Ile Glu Lys Glu Ala Lys Trp Phe Gln Glu Asp Gln Asn Val Leu Ala  
65 70 75 80Ile Leu Gln His Ser Leu Glu Ser Ser Ile Leu Glu Ala Tyr Ser Tyr  
85 90 95Cys Glu Thr Ala Arg Glu Leu Trp Glu Thr Leu Glu Asn Val Tyr Gly  
100 105 110Asn Val Ser Asn Leu Thr Arg Val Phe Glu Val Lys Lys Ala Ile Asn  
115 120 125Asn Leu Ser Gln Val Asp Leu Glu Phe Thr Lys His Phe Gly Lys Phe  
130 135 140Arg Ser Leu Trp Ala Glu Leu Glu Met Leu Arg Pro Ser Thr Val Asp  
145 150 155 160Pro Ala Ile Leu Asn Glu Arg Lys Glu Gln Glu Lys Val Phe Gly Leu  
165 170 175Leu Leu Thr Leu Asn Pro Ala Phe Asn Asp Leu Ile Lys His Leu Leu  
180 185 190

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Arg Ala Asp Lys Leu Pro Ser Leu Glu Asn Val Cys Ser Gln Val Gln  
195 200 205

Lys Glu Gln Gly Ser Leu Gly Leu Phe Ser Gly Lys Gly Glu Leu Ile  
210 215 220

Thr Ala His Lys Gly Ile Tyr Lys Gly Glu Glu Arg Lys Val Trp Val  
225 230 235 240

Cys Asp His Cys Lys Lys Lys Gly His Met Lys Asp Lys Cys Trp Ile  
245 250 255

Leu His Pro His Leu Lys Pro Ala Lys Phe Lys Ala Asn Ile Ser Gln  
260 265 270

Glu Val Ala Ser Asp Gln Gly Glu Val Val Arg Lys Ser Asp Leu Glu  
275 280 285

Ser Leu Ile Arg Ser Ile Ala Ser Leu Lys Glu Ser Gly Thr Ser Phe  
290 295 300

Leu Thr Tyr Glu Pro Asn Lys Met Leu Lys Glu Ser Gly Thr Ser Phe  
305 310 315 320

Phe Thr Ser Glu Pro Ser Lys Thr Leu Val Ile Asp Ser Gly Ala Ser  
325 330 335

His His Met Ile Asn Asn Pro Ser Leu Ile Asp Asn Ile Lys Pro Ala  
340 345 350

Leu Gly Asn Val Val Ile Ala Asn Gly Asp Lys Val Pro Val Lys Glu  
355 360 365

Ile Gly Glu Leu Asn Leu Phe Asp Lys Lys Ser Lys Ala Leu Tyr Met  
370 375 380

Pro Ser Phe Thr Ser Asn Leu Leu Ser Val Lys Arg Ala Thr Asn Asp  
385 390 395 400

Leu Asn Cys Tyr Thr Ile Phe Gly Pro Asn Ser Val His Phe Gln Asp  
405 410 415

Ile Lys Thr Gly Arg Ser Leu Thr Ile Tyr Glu Asn Cys Phe Asp Leu  
420 425 430

Val His Ser Asp Val Trp Thr Ser Pro Cys Met Ser Arg Asp Asn Lys  
435 440 445

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Lys Tyr Phe Val Thr Phe Ile Asp Glu Lys Ser Lys Tyr Thr Trp Ile  
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 465 470 475 480  
 Gln Asn Tyr Val Thr Asn Tyr Phe Asn Ala Lys Ile Lys Val Leu Arg  
 485 490 495  
 Ser Asp Asn Gly Gly Glu Tyr Thr Ser His Lys Phe Lys Glu Tyr Leu  
 500 505 510  
 Ala Lys His Gly Ile Ile His Gln Thr Ser Cys Pro Tyr Thr Pro Gln  
 515 520 525  
 Gln Asn Gly Val Ala Glu Arg Lys Asn Arg His Leu Met Glu Val Glu  
 530 535 540  
 Arg Ser Met Met Phe His Thr Asn Val Thr Lys Lys Phe Trp Gly Asp  
 545 550 555 560  
 Ala Val Met Thr Ala Cys Tyr Leu Ile Asn Arg Thr Pro Thr Lys Val  
 565 570 575  
 Leu Gln Asp Val Ser Thr Phe Glu Phe Phe Glu Glu Lys Gly Tyr Tyr  
 580 585 590  
 Glu Lys Lys Asp Trp Asn Ser Leu Ala Asp Leu Ser Thr Pro Ser Thr  
 595 600 605  
 Asp Arg Ala Thr Ser Leu Gln Phe Leu Leu Asp His Leu Gly Val Thr  
 610 615 620  
 Pro Ser Ser Glu Arg Glu Thr Lys Thr Arg Asp Leu Ile Glu Glu Pro  
 625 630 635 640  
 Ile Thr Ile Asp Gln Glu Asn Glu Gln Glu Glu Ala Ser Asn Leu Gln  
 645 650 655  
 Gln Asp Gly Glu Ile Asn Gly Ile Gln Ile His Asp Asp Met Asp Thr  
 660 665 670  
 Gln Asn Glu Asp Gly Asp Glu Val Leu Gly Leu Arg Glu Lys Ser Ser  
 675 680 685  
 Arg Leu Tyr Tyr Asn Asn Lys Ala Val Ala His Pro Ile Gln Ala Val  
 Page 2655

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695

Cys Ser Leu Ala Leu Leu Pro Gln Asp His Gln Ala Phe Ile Gly Lys  
705 710 715 720  
Ile Glu Ala Asn Phe Val Leu Gln Thr Tyr Glu Glu Ala Lys Glu Ser  
725 730 735  
Glu Glu Trp Ile Asn Ala Val Ala Asp Glu Thr Gly Ala Met Ile Arg  
740 745 750  
Asn His Thr Trp Asp Glu Glu Asp Leu Pro Pro Gly Lys Arg Ala Val  
755 760 765  
Ser Ser Lys Trp Val Phe Thr Ile Lys Tyr Leu Ser Asn Gly Glu Ile  
770 775 780  
Glu Arg His Lys Ala Arg Leu Val Ala Cys Gly Phe Thr Gln Thr Tyr  
785 790 795 800  
Gly Arg Asp Tyr Thr Glu Thr Phe Ala Pro Val Ala Lys Leu His Thr  
805 810 815  
Val Arg Val Val Leu Ser Leu Ala Thr Asn Leu Ser Trp Asp Leu Trp  
820 825 830  
Gln Met Asp Val Lys Asn Ala Phe Leu Gln Gly Glu Leu Glu Glu Glu  
835 840 845  
Val Tyr Met Thr Pro Pro Pro Gly Leu Glu Asp Ser Ile Ala Pro Gly  
850 855 860  
Lys Val Leu Arg Leu Arg Lys Ala Ile Tyr Gly Leu Lys Gln Ser Pro  
865 870 875 880  
Arg Ala Trp Tyr His Asn Leu Ser Thr Thr Leu Lys Gly Lys Gly Phe  
885 890 895  
Lys Lys Ser Glu Ala Asp His Thr Leu Phe Thr Leu Gln Ser Asp Gln  
900 905 910  
Gly Ile Ile Val Ala Leu Ile Tyr Val Asp Asn Ile Ile Ile Ser Gly  
915 920 925  
Asp Asn Lys Glu Gly Ile His Asp Thr Lys Leu Phe Leu Lys Ser Thr  
930 935 940

Phe Asp Ile Lys Asp Leu Gly Glu Leu Lys Tyr Phe Leu Gly Ile Glu  
 945 950 955 960

Val Cys Arg Ser Pro Glu Gly Leu Phe Leu Ser Gln Arg Lys Tyr Thr  
 965 970 975

Leu Asp Leu Leu Asn Glu Thr Gly Lys Leu Gly Ser Lys Pro Ala Lys  
 980 985 990

Thr Pro Leu Val Asp Gly Tyr Thr Val Lys Arg Thr Gly Gly Gly Arg  
 995 1000 1005

Arg Arg Arg Met His His Leu Ile Arg  
 1010 1015

<210> 1795

<211> 870

<212> DNA

<213> Arabidopsis thaliana

<400> 1795  
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 acaacagaag ggtttcagtc tattccttat gttgtggcgc tcttcagtcg gacgctttgg 180  
 ctttactatg cgacacagaa gaaagatgtc ttctcctcgc taaccattaa cgcctttggg 240  
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 atgttgacag tgaagatgct acttcttatg aactttggag gattctgtgc gattctcctt 360  
 ctttgccaat tcttggttaa aggagccaca cgtgctaaga ttatcggagg aatctgtgtc 420  
 ggattctctg tttgtgtttt cgctgctcct ctaagcataa tcaggacggt aataaagaca 480  
 agaagtgtgg agtacatgcc ctttagctta tccttaaccc ttaccatcag tgctgtcata 540  
 tggctccttt atggctcttg tcctcaaggac atctatgttg ctttcccgaa tgtgcttggg 600  
 tttgctctcg gtgcactcca aatgatactc tacgttgctc aaaaatactg taaaacgtcg 660  
 ccgcactcag gagagaaga agtcgaagct gctaagttac cggaggtgag cctcgatatg 720  
 ttgaagctag gcacagtctc atcccctgag ccaatctcag tggctcgtca agcgaacaag 780  
 tgtacctcgc gaaatgatcg aagggtgag attgaagatg gacaacccc taaacatggc 840  
 aagcagtcct cttccgcagc agctacatga 870

<210> 1796

&lt;211&gt; 289

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1796

Met Ser Leu Phe Asn Thr Glu Asn Thr Trp Ala Phe Val Phe Gly Leu  
 1 5 10 15

Leu Gly Asn Leu Ile Ser Phe Ala Val Phe Leu Ser Pro Val Pro Thr  
 20 25 30

Phe Tyr Arg Ile Trp Lys Lys Lys Thr Thr Glu Gly Phe Gln Ser Ile  
 35 40 45

Pro Tyr Val Val Ala Leu Phe Ser Ala Thr Leu Trp Leu Tyr Tyr Ala  
 50 55 60

Thr Gln Lys Lys Asp Val Phe Leu Leu Val Thr Ile Asn Ala Phe Gly  
 65 70 75 80

Cys Phe Ile Glu Thr Ile Tyr Ile Ser Met Phe Leu Ala Tyr Ala Pro  
 85 90 95

Lys Pro Ala Arg Met Leu Thr Val Lys Met Leu Leu Leu Met Asn Phe  
 100 105 110

Gly Gly Phe Cys Ala Ile Leu Leu Leu Cys Gln Phe Leu Val Lys Gly  
 115 120 125

Ala Thr Arg Ala Lys Ile Ile Gly Gly Ile Cys Val Gly Phe Ser Val  
 130 135 140

Cys Val Phe Ala Ala Pro Leu Ser Ile Ile Arg Thr Val Ile Lys Thr  
 145 150 155 160

Arg Ser Val Glu Tyr Met Pro Phe Ser Leu Ser Leu Thr Leu Thr Ile  
 165 170 175

Ser Ala Val Ile Trp Leu Leu Tyr Gly Leu Ala Leu Lys Asp Ile Tyr  
 180 185 190

Val Ala Phe Pro Asn Val Leu Gly Phe Ala Leu Gly Ala Leu Gln Met  
 195 200 205



Ile Leu Tyr Val Val Tyr Lys Tyr Cys Lys Thr Ser Pro His Leu Gly  
 210 215 220

Glu Lys Glu Val Glu Ala Ala Lys Leu Pro Glu Val Ser Leu Asp Met  
 225 230 235 240

Leu Lys Leu Gly Thr Val Ser Ser Pro Glu Pro Ile Ser Val Val Arg  
 245 250 255

Gln Ala Asn Lys Cys Thr Cys Gly Asn Asp Arg Arg Ala Glu Ile Glu  
 260 265 270

Asp Gly Gln Thr Pro Lys His Gly Lys Gln Ser Ser Ser Ala Ala Ala  
 275 280 285

Thr

<210> 1797

<211> 1833

<212> DNA

<213> Arabidopsis thaliana

<400> 1797

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tgtgggttaa ggctattcaa catgggtgat aaccttcaga ggagatctca agctaaacct	180
gtttctgcta aatcctcaaa gagatcttct aaagttaaga ctgctggtaa gattgtgtgt	240
gagaaaggaa tgtctgtgat ttttattgga gctgaagttg gtccatggag taaaactggt	300
ggctctgggt atgttctcgg tggctctacct ccagctcttg ctgctagagg ccaccgtgtg	360
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cagatcaaa ttggggataa agttgagaat gttcgtttct tcattgcta caaacgagga	480
gttgatcgtg tctttgttga ccatccaatc tttcttgcta aggttgtggg caaaacagga	540
tccaaaatct atggctcctt aactggagta gactacaatg acaaccaact ccggttcagt	600
ttgttgtgtc aggcgtctct tgaggcacca caggttctga acctgaacag cagcaagtac	660
ttctctggac catatggta agatgtatgc tttgttgcca atgactggca cactgctcta	720
cttccatggt acctcaaac tatgtatcaa tcccgcggag tctacatgaa tgcaagggtg	780
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gtactattgt cctttaatgt ggcgggaagt gaagccggaa ccgaggggtg agagatagct 1800
cctctggcca aggagaacgt agcgacgccg tga 1833

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&lt;210&gt; 1798

&lt;211&gt; 610

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1798

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Met Ala Thr Val Thr Ala Ser Ser Asn Phe Val Ser Arg Thr Ser Leu
1           5           10           15

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Phe Asn Asn His Gly Ala Ser Ser Cys Ser Asp Val Ala Gln Ile Thr
                20           25           30

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Leu Lys Gly Gln Ser Leu Thr His Cys Gly Leu Arg Ser Phe Asn Met
          35           40           45

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Val Asp Asn Leu Gln Arg Arg Ser Gln Ala Lys Pro Val Ser Ala Lys
          50           55           60

```

047-E2F-PCT.ST25.txt

Ser Ser Lys Arg Ser Ser Lys Val Lys Thr Ala Gly Lys Ile Val Cys  
65 70 75 80

Glu Lys Gly Met Ser Val Ile Phe Ile Gly Ala Glu Val Gly Pro Trp  
85 90 95

Ser Lys Thr Gly Gly Leu Gly Asp Val Leu Gly Gly Leu Pro Pro Ala  
100 105 110

Leu Ala Ala Arg Gly His Arg Val Met Thr Ile Cys Pro Arg Tyr Asp  
115 120 125

Gln Tyr Lys Asp Ala Trp Asp Thr Cys Val Val Val Gln Ile Lys Val  
130 135 140

Gly Asp Lys Val Glu Asn Val Arg Phe Phe His Cys Tyr Lys Arg Gly  
145 150 155 160

Val Asp Arg Val Phe Val Asp His Pro Ile Phe Leu Ala Lys Val Val  
165 170 175

Gly Lys Thr Gly Ser Lys Ile Tyr Gly Pro Ile Thr Gly Val Asp Tyr  
180 185 190

Asn Asp Asn Gln Leu Arg Phe Ser Leu Leu Cys Gln Ala Ala Leu Glu  
195 200 205

Ala Pro Gln Val Leu Asn Leu Asn Ser Ser Lys Tyr Phe Ser Gly Pro  
210 215 220

Tyr Gly Glu Asp Val Val Phe Val Ala Asn Asp Trp His Thr Ala Leu  
225 230 235 240

Leu Pro Cys Tyr Leu Lys Ser Met Tyr Gln Ser Arg Gly Val Tyr Met  
245 250 255

Asn Ala Lys Val Val Phe Cys Ile His Asn Ile Ala Tyr Gln Gly Arg  
260 265 270

Phe Ala Phe Asp Asp Tyr Ser Leu Leu Asn Leu Pro Ile Ser Phe Lys  
275 280 285

Ser Ser Phe Asp Phe Met Asp Gly Tyr Glu Lys Pro Val Lys Gly Arg  
290 295 300

Lys Ile Asn Trp Met Lys Ala Ala Ile Leu Glu Ala His Arg Val Leu  
305 310 315 320

047-E2F-PCT.ST25.txt

Thr Val Ser Pro Tyr Tyr Ala Gln Glu Leu Ile Ser Gly Val Asp Arg  
325 330 335

Gly Val Glu Leu His Lys Tyr Leu Arg Met Lys Thr Val Ser Gly Ile  
340 345 350

Ile Asn Gly Met Asp Val Gln Glu Trp Asn Pro Ser Thr Asp Lys Tyr  
355 360 365

Ile Asp Ile Lys Tyr Asp Ile Thr Thr Val Thr Asp Ala Lys Pro Leu  
370 375 380

Ile Lys Glu Ala Leu Gln Ala Ala Val Gly Leu Pro Val Asp Arg Asp  
385 390 395 400

Val Pro Val Ile Gly Phe Ile Gly Arg Leu Glu Glu Gln Lys Gly Ser  
405 410 415

Asp Ile Leu Val Glu Ala Ile Ser Lys Phe Met Gly Leu Asn Val Gln  
420 425 430

Met Val Ile Leu Gly Thr Gly Lys Lys Lys Met Glu Ala Gln Ile Leu  
435 440 445

Glu Leu Glu Glu Lys Phe Pro Gly Lys Ala Val Gly Val Ala Lys Phe  
450 455 460

Asn Val Pro Leu Ala His Met Ile Thr Ala Gly Ala Asp Phe Ile Ile  
465 470 475 480

Val Pro Ser Arg Phe Glu Pro Cys Gly Leu Ile Gln Leu His Ala Met  
485 490 495

Arg Tyr Gly Thr Val Pro Ile Val Ala Ser Thr Gly Gly Leu Val Asp  
500 505 510

Thr Val Lys Asp Gly Tyr Thr Gly Phe His Ile Gly Arg Phe Asn Val  
515 520 525

Lys Cys Glu Val Val Asp Pro Asp Asp Val Ile Ala Thr Ala Lys Ala  
530 535 540

Val Thr Arg Ala Val Ala Val Tyr Gly Thr Ser Ala Met Gln Glu Met  
545 550 555 560

Val Lys Asn Cys Met Asp Gln Asp Phe Ser Trp Lys Gly Pro Ala Arg  
565 570 575

047-E2F-PCT.ST25.txt

Leu Trp Glu Lys Val Leu Leu Ser Leu Asn Val Ala Gly Ser Glu Ala  
580 585 590

Gly Thr Glu Gly Glu Glu Ile Ala Pro Leu Ala Lys Glu Asn Val Ala  
595 600 605

Thr Pro  
610

<210> 1799

<211> 501

<212> DNA

<213> Arabidopsis thaliana

<400> 1799  
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gaaactggaa atccagtagc taaccggatt ggacaagctc tacgattcag caatgttaga 120  
atgagaaagc ccgcgtattt aggaacgacg ttatctgaga aatcaagagc aagaacatta 180  
acgacggcgg aagcagtttc cggaagtggg gtttcgcttc cgccgctgga ttgactgag 240  
gataatatcc atttggtagt atccgaagct cgtatcgagc tagcacaact cttcgactca 300  
tcggttggga taacaggaca agtagagtta gtggaactag acggaccatt cgttacgata 360  
agtttaagag gcaagttttg gcatacgctg gcaatggctt tagctcgact tgggaactac 420  
ttaaacaga ggatccctga gattttggag gttaatatgg aagatgaaaa gcaactcgat 480  
gatagtcctg caaatttcta a 501

<210> 1800

<211> 166

<212> PRT

<213> Arabidopsis thaliana

<400> 1800

Met Glu Leu Val Ser Leu Pro Ile His His Arg Thr Ala Pro Pro Asn  
1 5 10 15

Phe Pro Pro Leu Glu Thr Gly Asn Pro Val Ala Asn Arg Ile Gly Gln  
20 25 30

047-E2F-PCT.ST25.txt

Ala Leu Arg Phe Ser Asn Val Arg Met Arg Lys Pro Ala Tyr Leu Gly  
35 40 45

Thr Ile Leu Ser Glu Lys Ser Arg Ala Arg Thr Leu Thr Thr Ala Glu  
50 55 60

Ala Val Ser Gly Ser Gly Val Ser Leu Pro Pro Leu Asp Leu Thr Glu  
65 70 75 80

Asp Asn Ile His Leu Val Leu Ser Glu Ala Arg Ile Glu Leu Ala Gln  
85 90 95

Leu Phe Asp Ser Ser Val Gly Ile Thr Gly Gln Val Glu Leu Val Glu  
100 105 110

Leu Asp Gly Pro Phe Val Thr Ile Ser Leu Arg Gly Lys Phe Trp His  
115 120 125

Thr Arg Ala Met Val Leu Ala Arg Leu Gly Asn Tyr Leu Lys Gln Arg  
130 135 140

Ile Pro Glu Ile Leu Glu Val Asn Ile Glu Asp Glu Lys Gln Leu Asp  
145 150 155 160

Asp Ser Pro Ala Asn Phe  
165

<210> 1801

<211> 477

<212> DNA

<213> Arabidopsis thaliana

<400> 1801  
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tcacagagacc gatggagatt accggagatc caaaacaacg tagatgaatc gaagaaaacg 180  
gataagagag gtaagatccg atctagccgg aagcttggag atctttttgt ttctgcgcga 240  
ccgtttgagg aaagtggcgg tggcggcggc ggagataagg ggacgaagat ggaggtggag 300  
atggagaggg atgtaccggt taacggcggt agtaataacg caggttttgg agaagagata 360  
acggctcggc gtgtgggctt taacgggtct gttaggccca tgtcatctgt tacacttcga 420  
tgtagattac ttagacgac ttggcgtcct gtacttgtaa ctattcctga acaataa 477

&lt;210&gt; 1802

&lt;211&gt; 158

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1802

Met Ser Leu Gln Lys Phe Lys Leu Leu Ala Thr His Cys Ser Thr Val  
 1 5 10 15

Ala Glu Ser Pro Thr Arg Ser Pro Val Ile His Leu Arg Arg Arg Lys  
 20 25 30

Thr Leu Arg Leu Leu Leu Thr Arg Ser Ser Asp Arg Trp Arg Leu Pro  
 35 40 45

Glu Ile Gln Asn Asn Val Asp Glu Ser Lys Lys Thr Asp Lys Arg Gly  
 50 55 60

Lys Ile Arg Ser Ser Arg Lys Leu Gly Asp Leu Phe Val Ser Ser Pro  
 65 70 75 80

Pro Phe Glu Glu Ser Gly Gly Gly Gly Gly Gly Asp Lys Gly Thr Lys  
 85 90 95

Met Glu Val Glu Met Glu Arg Asp Val Pro Val Asn Gly Val Ser Asn  
 100 105 110

Asn Ala Gly Phe Gly Glu Glu Ile Thr Ala Arg Arg Val Gly Phe Asn  
 115 120 125

Gly Ser Val Arg Pro Met Ser Ser Val Thr Leu Arg Cys Arg Leu Leu  
 130 135 140

Arg Arg Ser Trp Arg Pro Val Leu Val Thr Ile Pro Glu Gln  
 145 150 155

&lt;210&gt; 1803

&lt;211&gt; 597

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

<400> 1803  
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 ttctccgtcg tagctatggc tcccagaaa aagggtgaaca aatatgatgc caagtgaag 180  
 aaacaatggt acggagctgg attgttttct gaaggagtg agcaataaaa cgttgatgtt 240  
 ttcaagaagc tggagaagcg aaaagtgttg agcaacgttg agaaatctgg cctgctgtca 300  
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 gcagaggacc ttggtcttct cagtctcctt gagaacttag ctggaacatc gcctgcggtc 420  
 ttagcctcgg ctgcattacc agctctcacg gctgctattg tagccgtggt gttgatcccg 480  
 gatgactcaa ctactctagt ggttgctcag gcggttttgg ccggtgctct tgcggttaca 540  
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<210> 1804

<211> 198

<212> PRT

<213> Arabidopsis thaliana

<400> 1804

Met Ala Val Val Gly Ala Pro Ile Ser Ser Pro Ala Ala Gln Leu Gln  
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Thr Gln Phe Leu Ser Asn Pro Ile Leu Pro Arg Phe Arg Arg Ser Phe  
 20 25 30

Ser Thr Gly Lys Ser Pro Ala Thr Phe Ser Val Val Ala Met Ala Pro  
 35 40 45

Gln Lys Lys Val Asn Lys Tyr Asp Ala Lys Trp Lys Lys Gln Trp Tyr  
 50 55 60

Gly Ala Gly Leu Phe Phe Glu Gly Ser Glu Gln Ile Asn Val Asp Val  
 65 70 75 80

Phe Lys Lys Leu Glu Lys Arg Lys Val Leu Ser Asn Val Glu Lys Ser  
 85 90 95

Gly Leu Leu Ser Lys Ala Glu Gly Leu Gly Leu Thr Leu Ser Ser Leu  
 100 105 110



Glu Lys Leu Lys Val Phe Ser Lys Ala Glu Asp Leu Gly Leu Leu Ser  
 115 120 125

Leu Leu Glu Asn Leu Ala Gly Thr Ser Pro Ala Val Leu Ala Ser Ala  
 130 135 140

Ala Leu Pro Ala Leu Thr Ala Ala Ile Val Ala Val Val Leu Ile Pro  
 145 150 155 160

Asp Asp Ser Thr Thr Leu Val Val Ala Gln Ala Val Leu Ala Gly Ala  
 165 170 175

Leu Ala Leu Thr Gly Val Val Leu Leu Val Gly Ser Val Val Leu Asp  
 180 185 190

Gly Leu Gln Glu Ala Asp  
 195

<210> 1805

<211> 627

<212> DNA

<213> Arabidopsis thaliana

<400> 1805  
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 aaatccgcac gccgcgcttc tctatctatc accgccacgg tatctgtccc accggaggag 180  
 gaggagatag ttgaactgaa gaaatcgcgc aaatcgaggc ttcccgaggg atttgctgct 240  
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 ggtactggga aggttatcat caactatcgt gatgccaagg agtaccttca gggaaatcca 360  
 ttgtggcttc agtatgttaa agtaccattg gtgactttag gatagagaa tagctacgac 420  
 atatttgtga aagcccatgg aggcggtctc tcaggtcaag ctcaagcaat taccttggga 480  
 gtcgcacgtg cactctgtaa ggtaagtgca gaccacagat cgcctttgaa gaagggaaggt 540  
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 aaagcccccac aattctccaa gcgttaa 627

<210> 1806

<211> 208

<212> PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1806

Met Ala Ser Ile Thr Asn Leu Ala Ser Ser Leu Ser Ser Phe  
1 5 10 15

Ser Ser Gln Val Ser Gln Arg Pro Asn Thr Ile Ser Phe Pro Arg Ala  
20 25 30

Asn Ser Val Phe Ala Leu Pro Ala Lys Ser Ala Arg Arg Ala Ser Leu  
35 40 45

Ser Ile Thr Ala Thr Val Ser Ala Pro Pro Glu Glu Glu Ile Val  
50 55 60

Glu Leu Lys Lys Tyr Val Lys Ser Arg Leu Pro Gly Gly Phe Ala Ala  
65 70 75 80

Gln Lys Ile Ile Gly Thr Gly Arg Arg Lys Cys Ala Ile Ala Arg Val  
85 90 95

Val Leu Gln Glu Gly Thr Gly Lys Val Ile Ile Asn Tyr Arg Asp Ala  
100 105 110

Lys Glu Tyr Leu Gln Gly Asn Pro Leu Trp Leu Gln Tyr Val Lys Val  
115 120 125

Pro Leu Val Thr Leu Gly Tyr Glu Asn Ser Tyr Asp Ile Phe Val Lys  
130 135 140

Ala His Gly Gly Gly Leu Ser Gly Gln Ala Gln Ala Ile Thr Leu Gly  
145 150 155 160

Val Ala Arg Ala Leu Leu Lys Val Ser Ala Asp His Arg Ser Pro Leu  
165 170 175

Lys Lys Glu Gly Leu Leu Thr Arg Asp Ala Arg Val Val Glu Arg Lys  
180 185 190

Lys Ala Gly Leu Lys Lys Ala Arg Lys Ala Pro Gln Phe Ser Lys Arg  
195 200 205

&lt;210&gt; 1807

&lt;211&gt; 2154

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1807

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gttgagttag cggagacttc aagagccggt gtgaaagcta gcagtgattg ggttatggag    300
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cggagaacca aaaacggcac cgcattacaa acagaactca ttagattttt gaacgccgga    420
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gaagcgatta caagtctct caaccacaac atctctccgt cactacctct ccgtggaacc    600
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ccttcgaatc taactgctt gagtaatcca agtttgatt atggattcaa aggagcagag   1380
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gttcaatcag ctgagcaaca taatcaagat gtgaactctc ttggtttgat ctgctctcgt   1500
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tgtaagctg  ttgatttgag acatttgag  gagaatctga gacaaactgt gaagaacaca   1620
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agggttttgcg agaaggactt gcttaagggtt gttgatcgtg agcaagtgtt cacgtatgtg 1740
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gcttatggga atggaactgc gccgattcct aaccggatta aggaatgtag gtcgtatccg 1980
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&lt;210&gt; 1808

&lt;211&gt; 717

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1808

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Met Asp Gln Ile Glu Ala Met Leu Cys Gly Gly Gly Glu Lys Thr Lys
1      5      10

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Val Ala Val Thr Thr Lys Thr Leu Ala Asp Pro Leu Asn Trp Gly Leu
20      25      30

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Ala Ala Asp Gln Met Lys Gly Ser His Leu Asp Glu Val Lys Lys Met
35      40      45

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Val Glu Glu Tyr Arg Arg Pro Val Val Asn Leu Gly Gly Glu Thr Leu
50      55      60

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```

Thr Ile Gly Gln Val Ala Ala Ile Ser Thr Val Gly Gly Ser Val Lys
65      70      75      80

```

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Val Glu Leu Ala Glu Thr Ser Arg Ala Gly Val Lys Ala Ser Ser Asp
85      90      95

```

```

Trp Val Met Glu Ser Met Asn Lys Gly Thr Asp Ser Tyr Gly Val Thr
100     105

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Thr Gly Phe Gly Ala Thr Ser His Arg Arg Thr Lys Asn Gly Thr Ala
115     120

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Leu Gln Thr Glu Leu Ile Arg Phe Leu Asn Ala Gly Ile Phe Gly Asn
130     135     140

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Thr Lys Glu Thr Cys His Thr Leu Pro Gln Ser Ala Thr Arg Ala Ala  
145 150 155 160

Met Leu Val Arg Val Asn Thr Leu Leu Gln Gly Tyr Ser Gly Ile Arg  
165 170 175

Phe Glu Ile Leu Glu Ala Ile Thr Ser Leu Leu Asn His Asn Ile Ser  
180 185 190

Pro Ser Leu Pro Leu Arg Gly Thr Ile Thr Ala Ser Gly Asp Leu Val  
195 200 205

Pro Leu Ser Tyr Ile Ala Gly Leu Leu Thr Gly Arg Pro Asn Ser Lys  
210 215 220

Ala Thr Gly Pro Asp Gly Glu Ser Leu Thr Ala Lys Glu Ala Phe Glu  
225 230 235 240

Lys Ala Gly Ile Ser Thr Gly Phe Phe Asp Leu Gln Pro Lys Glu Gly  
245 250 255

Leu Ala Leu Val Asn Gly Thr Ala Val Gly Ser Gly Met Ala Ser Met  
260 265 270

Val Leu Phe Glu Ala Asn Val Gln Ala Val Leu Ala Glu Val Leu Ser  
275 280 285

Ala Ile Phe Ala Glu Val Met Ser Gly Lys Pro Glu Phe Thr Asp His  
290 295 300

Leu Thr His Arg Leu Lys His His Pro Gly Gln Ile Glu Ala Ala Ala  
305 310 315 320

Ile Met Glu His Ile Leu Asp Gly Ser Ser Tyr Met Lys Leu Ala Gln  
325 330 335

Lys Val His Glu Met Asp Pro Leu Gln Lys Pro Lys Gln Asp Arg Tyr  
340 345 350

Ala Leu Arg Thr Ser Pro Gln Trp Leu Gly Pro Gln Ile Glu Val Ile  
355 360 365

Arg Gln Ala Thr Lys Ser Ile Glu Arg Glu Ile Asn Ser Val Asn Asp  
370 375 380

Asn Pro Leu Ile Asp Val Ser Arg Asn Lys Ala Ile His Gly Gly Asn  
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385 390 400  
Phe Gln Gly Thr Pro Ile Gly Val Ser Met Asp Asn Thr Arg Leu Ala  
405 410 415  
Ile Ala Ala Ile Gly Lys Leu Met Phe Ala Gln Phe Ser Glu Leu Val  
420 425 430  
Asn Asp Phe Tyr Asn Asn Gly Leu Pro Ser Asn Leu Thr Ala Ser Ser  
435 440 445  
Asn Pro Ser Leu Asp Tyr Gly Phe Lys Gly Ala Glu Ile Ala Met Ala  
450 455 460  
Ser Tyr Cys Ser Glu Leu Gln Tyr Leu Ala Asn Pro Val Thr Ser His  
465 470 475 480  
Val Gln Ser Ala Glu Gln His Asn Gln Asp Val Asn Ser Leu Gly Leu  
485 490 495  
Ile Ser Ser Arg Lys Thr Ser Glu Ala Val Asp Ile Leu Lys Leu Met  
500 505 510  
Ser Thr Thr Phe Leu Val Gly Ile Cys Gln Ala Val Asp Leu Arg His  
515 520 525  
Leu Glu Glu Asn Leu Arg Gln Thr Val Lys Asn Thr Val Ser Gln Val  
530 535 540  
Ala Lys Lys Val Leu Thr Thr Gly Ile Asn Gly Glu Leu His Pro Ser  
545 550 555 560  
Arg Phe Cys Glu Lys Asp Leu Leu Lys Val Val Asp Arg Glu Gln Val  
565 570 575  
Phe Thr Tyr Val Asp Asp Pro Cys Ser Ala Thr Tyr Pro Leu Met Gln  
580 585 590  
Arg Leu Arg Gln Val Ile Val Asp His Ala Leu Ser Asn Gly Glu Thr  
595 600 605  
Glu Lys Asn Ala Val Thr Ser Ile Phe Gln Lys Ile Gly Ala Phe Glu  
610 615 620  
Glu Glu Leu Lys Ala Val Leu Pro Lys Glu Val Glu Ala Ala Arg Ala  
625 630 635 640

Ala Tyr Gly Asn Gly Thr Ala Pro Ile Pro Asn Arg Ile Lys Glu Cys  
645 650 655

Arg Ser Tyr Pro Leu Tyr Arg Phe Val Arg Glu Glu Leu Gly Thr Lys  
660 665 670

Leu Leu Thr Gly Glu Lys Val Val Ser Pro Gly Glu Glu Phe Asp Lys  
675 680 685

Val Phe Thr Ala Met Cys Glu Gly Lys Leu Ile Asp Pro Leu Met Asp  
690 695 700

Cys Leu Lys Glu Trp Asn Gly Ala Pro Ile Pro Ile Cys  
705 710 715

<210> 1809

<211> 1029

<212> DNA

<213> Arabidopsis thaliana

<400> 1809  
atgatcaaa gaaacaatgg aaacagagga tcttcttctt ctggttactc tgcagatttg 60  
ttggtttgtt tcccttcaag aaccactta gctctgactc ctaagcccat ttgtagccca 120  
tctcgtccct cagactcttc cactaaccgt cgtcctcacc accgtcgcca gctcagtaaa 180  
ctctccggcg gcgggtggagg aggacacggt agtcctgttt tgtgggctaa acaagcaagt 240  
agtaagaata tgggagggtga cgaaatagca gaaccaactt ctccctaaagt aacttgcgca 300  
ggtcagatca aagtccggcc aagtaaatgc ggaggggagag gaaagaactg gcaatcggtg 360  
atggaagaga ttgagaggat acatgataat agatcgcaaa gcaagttttt tgggttgaag 420  
aaagatgtga tgggttttctt gacttgtctt agaaacatca aattcgattt caggtgtttt 480  
ggtgatttcc gacatgctga tgtcactagc gacgacgatg aggaagaaga tgatgatgat 540  
gatgaggaag aagaggtagt ggaaggagaa gaagaagaga attcaaaagac tgttttctct 600  
aaatggttta tgggttttaca agagggaacag aacaacaag atgacgacaa gaacaacaac 660  
aagtgtgatg agaaacgcga tcttgaagac acagagacag aaccagcggg tccgccgcca 720  
aacgcgtttt tgttgatgcg gtgtagatca gctccagcga agagttgggt agaagagaga 780  
atgaaagtaa aaacagagca agaaaagaga gaagaacaaa aagaggaaaa agaacagag 840  
gatcaagaaa cgagtatgaa gacaaagaag aaggatttga gatcattaat ggaagaagag 900  
aagatggaat tgggtgtgat gagatacgat actgagtttt acagactctc ttcagacata 960

gctaaggaaa cttgggttgt cggaggaatt caagatcctc tgtctcggag tcgaagctgg 1020

aaaaattga 1029

&lt;210&gt; 1810

&lt;211&gt; 342

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1810

Met Ile Lys Gly Asn Asn Gly Asn Arg Gly Ser Ser Ser Ser Gly Tyr  
1 5 10 15Ser Ala Asp Leu Leu Val Cys Phe Pro Ser Arg Thr His Leu Ala Leu  
20 25 30Thr Pro Lys Pro Ile Cys Ser Pro Ser Arg Pro Ser Asp Ser Ser Thr  
35 40 45Asn Arg Arg Pro His His Arg Arg Gln Leu Ser Lys Leu Ser Gly Gly  
50 55 60Gly Gly Gly Gly His Gly Ser Pro Val Leu Trp Ala Lys Gln Ala Ser  
65 70 75 80Ser Lys Asn Met Gly Gly Asp Glu Ile Ala Glu Pro Thr Ser Pro Lys  
85 90 95Val Thr Cys Ala Gly Gln Ile Lys Val Arg Pro Ser Lys Cys Gly Gly  
100 105 110Arg Gly Lys Asn Trp Gln Ser Val Met Glu Glu Ile Glu Arg Ile His  
115 120 125Asp Asn Arg Ser Gln Ser Lys Phe Phe Gly Leu Lys Lys Asp Val Met  
130 135 140Gly Phe Leu Thr Cys Leu Arg Asn Ile Lys Phe Asp Phe Arg Cys Phe  
145 150 155 160Gly Asp Phe Arg His Ala Asp Val Thr Ser Asp Asp Asp Glu Glu Glu  
165 170 175Asp Asp Asp Asp Glu Glu Glu Glu Val Val Glu Gly Glu Glu Glu  
180 185 190



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Glu Asn Ser Lys Thr Val Phe Ser Lys Trp Phe Met Val Leu Gln Glu  
195 200 205

Glu Gln Asn Asn Lys Asp Asp Lys Asn Asn Asn Lys Cys Asp Glu  
210 215 220

Lys Arg Asp Leu Glu Asp Thr Glu Thr Glu Pro Ala Val Pro Pro Pro  
225 230 235 240

Asn Ala Leu Leu Leu Met Arg Cys Arg Ser Ala Pro Ala Lys Ser Trp  
245 250 255

Leu Glu Glu Arg Met Lys Val Lys Thr Glu Gln Glu Lys Arg Glu Glu  
260 265 270

Gln Lys Glu Glu Lys Glu Thr Glu Asp Gln Glu Thr Ser Met Lys Thr  
275 280 285

Lys Lys Lys Asp Leu Arg Ser Leu Met Glu Glu Glu Lys Met Glu Leu  
290 295 300

Val Leu Met Arg Tyr Asp Thr Glu Phe Tyr Arg Leu Ser Ser Asp Ile  
305 310 315 320

Ala Lys Glu Thr Trp Val Val Gly Gly Ile Gln Asp Pro Leu Ser Arg  
325 330 335

Ser Arg Ser Trp Lys Asn  
340

<210> 1811

<211> 624

<212> DNA

<213> Arabidopsis thaliana

<400> 1811  
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tcgccatct tcgagaacat cccctccacc aaggttggtc ccgcacagat cgagaaaagt 120  
gtctctttgg tctctcgat cggtcgcgat ttgcagcggt acgatcacgc tggctatcgt 180  
caagtcgtcg gatgtgtacc gtatagatac aagaacaag aagtcattgg agttgaaacc 240  
caagtaatcc aagttctct tgtcagtgct caaaagggca aaggaatggt atttcacaaa 300

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ggaggttggg agacggatga atcaatggag gaagctgctt tgagagagac gatcgaagaa 360
gcgggtgtaa caggagagct cgaagaaaag cttgggaaat ggcaatacaa aagcaaaaga 420
catagcataa ttcacgatgg gtatatgttt gctttgcttg tcagtcaaga gttcgagcga 480
tggcctgagg cggaaatgag acaacgcaga tgggtaagtt tggatgaagc aagagaagta 540
tgtcagaatt ggtggatgag agaagctctt gaagcattca ttaacctgaa atgtctagct 600
gacgatgatg aaagtgggaa ctga 624

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&lt;210&gt; 1812

&lt;211&gt; 207

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1812

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Met Thr Gly Phe Ser Val Ser Leu Phe Val Ser Asn Leu Ser Asn Val
1      5      10      15

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Ala Ser Tyr Leu Ser Pro Ile Phe Glu Asn Ile Pro Ser Thr Lys Val
20      25      30

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Val Pro Ala Gln Ile Glu Lys Val Val Ser Leu Val Ser Arg Thr Gly
35      40      45

```

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Arg Asp Leu Gln Arg Tyr Asp His Ala Gly Tyr Arg Gln Val Val Gly
50      55      60

```

```

Cys Val Pro Tyr Arg Tyr Lys Lys Gln Glu Val Asn Gly Val Glu Thr
65      70      75      80

```

```

Gln Val Ile Gln Val Leu Leu Val Ser Ala Gln Lys Gly Lys Gly Met
85      90      95

```

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Leu Phe Pro Lys Gly Gly Trp Glu Thr Asp Glu Ser Met Glu Glu Ala
100     105     110

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Ala Leu Arg Glu Thr Ile Glu Glu Ala Gly Val Thr Gly Glu Leu Glu
115     120     125

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Glu Lys Leu Gly Lys Trp Gln Tyr Lys Ser Lys Arg His Ser Ile Ile
130     135     140

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His Asp Gly Tyr Met Phe Ala Leu Leu Val Ser Gln Glu Phe Glu Arg
145     150     155     160

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Trp Pro Glu Ala Glu Met Arg Gln Arg Arg Trp Val Ser Leu Asp Glu  
 165 170 175

Ala Arg Glu Val Cys Gln Asn Trp Trp Met Arg Glu Ala Leu Glu Ala  
 180 185 190

Phe Ile Asn Leu Lys Cys Leu Ala Asp Asp Asp Glu Ser Gly Asn  
 195 200 205

<210> 1813

<211> 1485

<212> DNA

<213> Arabidopsis thaliana

<400> 1813  
 atgtctgcct gtttgtgtct tgttttcctg ttcttctcta ttgttcgaga agcaacgtat 60  
 tctccaggag gtttccacca tttttcttct ctaagactaa agaagaaggt gtccaagtca 120  
 aaacatgagt taccttttga aactcgttac ttccctcaaa atcttgacca cttcagtttc 180  
 acaccagaca gctacaaagt ctccaccag aagtacctca tcaacaaccg tttctggcga 240  
 aaaggtggtc ccattcttgg ttacactgga aatgaaggag acatcgactg gtttgcttcc 300  
 aacaccgggt tcattgctgga tattgtctcc aagttccggg ctcttcttgt ttctattgaa 360  
 caccggttct atggagaatc aacgccattt gggaagaagt cgcataagtc agctgagaca 420  
 ttgggttacc taaactctca gcaagcgttg gctgattatg caatcctgat aagaagcttg 480  
 aagcagaatc tatcgtctga ggcacgcct gtggttgtct ttggtggctc ttatgggtgga 540  
 atgcttgcag cgtggttcag actcaagtat cccacataa caatcggtgc attggcatcc 600  
 tccgctccaa tacttcattt cgataacatt gtaccattga caagcttcta tgatgccatt 660  
 tctcaggatt ttaaggatgc aagtattaat tgtttcaag tcatcaagag aagctgggaa 720  
 gagctagagg cagtttcaac tatgaaaaat ggcttgcaag aactcagcaa aaagtccga 780  
 acttgcaagg gccttcattc tcaatattca gccagagatt ggtaagtgg agcatttgtt 840  
 tatacagcca tgggttaatta tccaactgca gctaatttca tggcgccact gcctggttat 900  
 cccgtagagc agatgtgcaa gatcatcgac gggttccctc gaggatccag taactttgac 960  
 cgtgcctttg ctgctgcaag ctatactac aactattcgg gatcagaaaa atgcttcgag 1020  
 atggaacaac aaactgatga tcatggactt gatggttggc aatatcaggc gtgtacagag 1080  
 atggtgatgc caatgagctg ctgaaccag agcatgctcc ctccgtacga aaatgactct 1140

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gaggcattcc aagaacaatg catgactaga tacggagtca agcctcgacc ccattggatc 1200  
 accacagaat ttggtggaat gaggatagag acagtactga agagatttgg aagcaacatc 1260  
 atattctcca atggaatgca ggacccttgg agccgtggag gggttctgaa gaacatttca 1320  
 agtagcatcg ttgcgcttgt gaccaagaaa ggagctcacc atgcagatct cagggtctgct 1380  
 acaaaagatg acccagagtg gctgaaagag cagaggaggc aagaggttgc cattatagag 1440  
 aaatggatca gtgagtatta cagagattta agagaagagc aatag 1485

<210> 1814

<211> 494

<212> PRT

<213> Arabidopsis thaliana

<400> 1814

Met Ser Ala Cys Leu Cys Leu Val Phe Leu Phe Phe Ser Ile Val Ala  
 1 5 10 15

Glu Ala Thr Tyr Ser Pro Gly Gly Phe His His Leu Ser Ser Leu Arg  
 20 25 30

Leu Lys Lys Lys Val Ser Lys Ser Lys His Glu Leu Pro Phe Glu Thr  
 35 40 45

Arg Tyr Phe Pro Gln Asn Leu Asp His Phe Ser Phe Thr Pro Asp Ser  
 50 55 60

Tyr Lys Val Phe His Gln Lys Tyr Leu Ile Asn Asn Arg Phe Trp Arg  
 65 70 75 80

Lys Gly Gly Pro Ile Phe Val Tyr Thr Gly Asn Glu Gly Asp Ile Asp  
 85 90 95

Trp Phe Ala Ser Asn Thr Gly Phe Met Leu Asp Ile Ala Pro Lys Phe  
 100 105 110

Arg Ala Leu Leu Val Phe Ile Glu His Arg Phe Tyr Gly Glu Ser Thr  
 115 120 125

Pro Phe Gly Lys Lys Ser His Lys Ser Ala Glu Thr Leu Gly Tyr Leu  
 130 135 140

Asn Ser Gln Gln Ala Leu Ala Asp Tyr Ala Ile Leu Ile Arg Ser Leu  
 145 150 155 160

047-E2F-PCT.ST25.txt

Lys Gln Asn Leu Ser Ser Glu Ala Ser Pro Val Val Val Phe Gly Gly  
 165 170 175  
 Ser Tyr Gly Gly Met Leu Ala Ala Trp Phe Arg Leu Lys Tyr Pro His  
 180 185 190  
 Ile Thr Ile Gly Ala Leu Ala Ser Ser Ala Pro Ile Leu His Phe Asp  
 195 200 205  
 Asn Ile Val Pro Leu Thr Ser Phe Tyr Asp Ala Ile Ser Gln Asp Phe  
 210 215 220  
 Lys Asp Ala Ser Ile Asn Cys Phe Lys Val Ile Lys Arg Ser Trp Glu  
 225 230 235 240  
 Glu Leu Glu Ala Val Ser Thr Met Lys Asn Gly Leu Gln Glu Leu Ser  
 245 250 255  
 Lys Lys Phe Arg Thr Cys Lys Gly Leu His Ser Gln Tyr Ser Ala Arg  
 260 265 270  
 Asp Trp Leu Ser Gly Ala Phe Val Tyr Thr Ala Met Val Asn Tyr Pro  
 275 280 285  
 Thr Ala Ala Asn Phe Met Ala Pro Leu Pro Gly Tyr Pro Val Glu Gln  
 290 295 300  
 Met Cys Lys Ile Ile Asp Gly Phe Pro Arg Gly Ser Ser Asn Leu Asp  
 305 310 315 320  
 Arg Ala Phe Ala Ala Ser Leu Tyr Tyr Asn Tyr Ser Gly Ser Glu  
 325 330 335  
 Lys Cys Phe Glu Met Glu Gln Gln Thr Asp Asp His Gly Leu Asp Gly  
 340 345 350  
 Trp Gln Tyr Gln Ala Cys Thr Glu Met Val Met Pro Met Ser Cys Ser  
 355 360 365  
 Asn Gln Ser Met Leu Pro Pro Tyr Glu Asn Asp Ser Glu Ala Phe Gln  
 370 375 380  
 Glu Gln Cys Met Thr Arg Tyr Gly Val Lys Pro Arg Pro His Trp Ile  
 385 390 395 400  
 Thr Thr Glu Phe Gly Gly Met Arg Ile Glu Thr Val Leu Lys Arg Phe  
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405

415

Gly Ser Asn Ile Ile Phe Ser Asn Gly Met Gln Asp Pro Trp Ser Arg  
420 425 430

Gly Gly Val Leu Lys Asn Ile Ser Ser Ser Ile Val Ala Leu Val Thr  
435 440 445

Lys Lys Gly Ala His His Ala Asp Leu Arg Ala Ala Thr Lys Asp Asp  
450 455 460

Pro Glu Trp Leu Lys Glu Gln Arg Arg Gln Glu Val Ala Ile Ile Glu  
465 470 475 480

Lys Trp Ile Ser Glu Tyr Tyr Arg Asp Leu Arg Glu Glu Gln  
485 490

<210> 1815

<211> 258

<212> DNA

<213> Arabidopsis thaliana

<400> 1815  
atggttttga agttgtacca agactggaga ttttggatgc tcctttcacg agttcttgaa 60  
ggtcaaaagag agcgtgaccg tgaaagggt ctagctcgaa ccggaggcaa aggaagaac 120  
aaagatgatg gattaactcc tgagcaacgt cgtgaaagag atgcaaaagc attgcaagag 180  
aagactgcaa agaaagctgc tcaagccgct gctgcagcta gttccggagg aggaggaggc 240  
aaaggaaaca ataagtga 258

<210> 1816

<211> 85

<212> PRT

<213> Arabidopsis thaliana

<400> 1816

Met Val Leu Lys Leu Tyr Gln Asp Trp Arg Phe Trp Met Leu Leu Ser  
1 5 10 15

Arg Val Leu Glu Gly Gln Arg Glu Arg Asp Arg Glu Arg Ala Leu Ala  
20 25 30

Arg Thr Gly Gly Lys Gly Lys Asn Lys Asp Asp Gly Leu Thr Pro Glu  
 35 40 45

Gln Arg Arg Glu Arg Asp Ala Lys Ala Leu Gln Glu Lys Thr Ala Lys  
 50 55 60

Lys Ala Ala Gln Ala Ala Ala Ala Ala Ser Ser Gly Gly Gly Gly Gly  
 65 70 75 80

Lys Gly Asn Asn Lys  
 85

<210> 1817

<211> 1026

<212> DNA

<213> Arabidopsis thaliana

<400> 1817  
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 acagtacctg atgggtcatgt ttggcgtgta ggactaagga aagctgacaa caaaatttgg 180  
 ttccaagatg gttggcaaga gtttgttgac cgttactcca ttgcatttg ttatcttttg 240  
 atttttagat atgaaggaaa ctctgccttc agcgtctaca ttttcaattt atcccactct 300  
 gagatcaatt accattccac cgggtctcatg gattccgctc acaaccactt caaacgcgcc 360  
 cgtttgtttg aagaccttga agatgaagat gccgaggta tcttcccttc ttctgtgtac 420  
 ccatcaccac ttctgtgagtc tacagtacca gccacaaga ggtagctag ttacgccatc 480  
 caaaccttgt tcactggacc agttaagct gaagagccaa cgccaacccc aaaaatacct 540  
 aaaaagagag ggaggaagaa gaaaaatgct gatcctgagg aaataaactc atcagctccg 600  
 cgagatgatg atccagagaa ccgttcaaag ttctacgaga gtgcttctgc gagaagagaa 660  
 accgtgactg cagaagaaa agagagagcc atcaatgcag ccaaaacggt cgaaccaaca 720  
 aaccctttct tcagagtggg tctgcgacca tctatctat acagaggttg catcatgtat 780  
 cttccttctg ggtttgtcga gaagtaccta agtgggatct ccgggttcat caaagtccag 840  
 cttgcggaga aacaatggcc tgttcgatgt ctctacaag ccgggagagc caaattcagt 900  
 caaggatggt acgaattcac tctagagaac aacttaggag aaggagacgt ctgtgtgttt 960  
 gagctgctca gaaccagaga ttctgttttg aaagtgcagc ctttctgagt caacgagtac 1020

gtctga

&lt;210&gt; 1818

&lt;211&gt; 341

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1818

Met Pro Arg Pro Phe Phe His Lys Leu Ile Phe Ser Ser Thr Ile Gln  
1 5 10 15Glu Lys Arg Leu Arg Val Pro Asp Lys Phe Val Ser Lys Phe Lys Asp  
20 25 30Glu Leu Ser Val Ala Val Ala Leu Thr Val Pro Asp Gly His Val Trp  
35 40 45Arg Val Gly Leu Arg Lys Ala Asp Asn Lys Ile Trp Phe Gln Asp Gly  
50 55 60Trp Gln Glu Phe Val Asp Arg Tyr Ser Ile Arg Ile Gly Tyr Leu Leu  
65 70 75 80Ile Phe Arg Tyr Glu Gly Asn Ser Ala Phe Ser Val Tyr Ile Phe Asn  
85 90 95Leu Ser His Ser Glu Ile Asn Tyr His Ser Thr Gly Leu Met Asp Ser  
100 105 110Ala His Asn His Phe Lys Arg Ala Arg Leu Phe Glu Asp Leu Glu Asp  
115 120 125Glu Asp Ala Glu Val Ile Phe Pro Ser Ser Val Tyr Pro Ser Pro Leu  
130 135 140Pro Glu Ser Thr Val Pro Ala Asn Lys Gly Tyr Ala Ser Ser Ala Ile  
145 150 155 160Gln Thr Leu Phe Thr Gly Pro Val Lys Ala Glu Glu Pro Thr Pro Thr  
165 170 175Pro Lys Ile Pro Lys Lys Arg Gly Arg Lys Lys Lys Asn Ala Asp Pro  
180 185 190



Glu Glu Ile Asn Ser Ser Ala Pro Arg Asp Asp Asp Pro Glu Asn Arg  
 195 200 205

Ser Lys Phe Tyr Glu Ser Ala Ser Ala Arg Lys Arg Thr Val Thr Ala  
 210 215 220

Glu Glu Arg Glu Arg Ala Ile Asn Ala Ala Lys Thr Phe Glu Pro Thr  
 225 230 235 240

Asn Pro Phe Phe Arg Val Val Leu Arg Pro Ser Tyr Leu Tyr Arg Gly  
 245 250 255

Cys Ile Met Tyr Leu Pro Ser Gly Phe Ala Glu Lys Tyr Leu Ser Gly  
 260 265 270

Ile Ser Gly Phe Ile Lys Val Gln Leu Ala Glu Lys Gln Trp Pro Val  
 275 280 285

Arg Cys Leu Tyr Lys Ala Gly Arg Ala Lys Phe Ser Gln Gly Trp Tyr  
 290 295 300

Glu Phe Thr Leu Glu Asn Asn Leu Gly Glu Gly Asp Val Cys Val Phe  
 305 310 315 320

Glu Leu Leu Arg Thr Arg Asp Phe Val Leu Lys Val Thr Ala Phe Arg  
 325 330 335

Val Asn Glu Tyr Val  
 340

<210> 1819

<211> 468

<212> DNA

<213> Arabidopsis thaliana

<400> 1819  
 atggctcgat ctttatctcc ttcaatttct ctctctcgat accgtttcgc cgcagcttct 60  
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 aactctaacc atctcggagt aatctacgag attgatatcg ctgcggatcc tcttgtaaat 180  
 aagttggaag atgctgtcca ccggattatg gtacgccgat ccgcacctga ttggctccct 240  
 ttgtgcccg gtgcttcctt ttgggttcca ctcctagat ccagttctca tgggacgcgt 300  
 aagctcgttg agaagctggc caatccgata tctgatgaag aatctatttc aatctcatcg 360

gttcgaggat ggccttgctc tgattacttc atcaaagggtg taaagcctca atcagttgag 420  
 acggagatga cttcaaatac tgcataatcac tccgaggacg aggaataa 468

<210> 1820

<211> 155

<212> PRT

<213> Arabidopsis thaliana

<400> 1820

Met Ala Arg Ser Leu Ser Pro Ser Leu Ser Leu Ser Arg Tyr Arg Phe  
 1 5 10 15

Ala Ala Ala Ser Leu Leu Leu Pro Ser Ser Gln Thr Ile Phe Ile Arg  
 20 25 30

Ser Gln Ser Ser Asn Arg Arg Ser Asn Ser Asn His Leu Gly Val Ile  
 35 40 45

Tyr Glu Ile Asp Ile Ala Ala Asp Pro Leu Val Asn Lys Leu Glu Asp  
 50 55 60

Ala Val His Arg Ile Met Val Arg Arg Ser Ala Pro Asp Trp Leu Pro  
 65 70 75 80

Phe Val Pro Gly Ala Ser Phe Trp Val Pro Pro Pro Arg Ser Gln Ser  
 85 90 95

His Gly Ile Ala Lys Leu Val Glu Lys Leu Ala Asn Pro Ile Ser Asp  
 100 105 110

Glu Glu Ser Ile Ser Ile Ser Ser Val Arg Gly Trp Pro Cys Ser Asp  
 115 120 125

Tyr Phe Ile Lys Gly Val Lys Pro Gln Ser Val Glu Thr Glu Met Thr  
 130 135 140

Ser Asn Thr Ala Tyr His Ser Glu Asp Glu Glu  
 145 150 155

<210> 1821

<211> 630

<212> DNA

<213> *Arabidopsis thaliana*

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<400> 1821
atggagataa caatatccca attgtgctct cgagttaagt ttatcatc atcatcatca 60
tcatacttt tctgtttcta tggaaacagt aatagaaaca acctaattg agctgtttca 120
gtaactgct tgagagagaa tgagcagatc agtaatatta gttcattgc gaagaaacca 180
agaagtcag caccggtggt gagaacaaca cgcgcctcct tggatgagaa tcaatcccca 240
acttcggag gagaacggtg gcttctcaaa ccagttggcg atggagacac aagacacatt 300
ggttacaaa tggcaatgcc tgctcctttt gagatctcct ctggccaagt taccatcgga 360
cggctaccgg aaaaggctga cgtcgtgatt cctgttgcca ccgtgtcagg agtccatgcg 420
acaatcaata cgaatgaaaa gaaccttctt gtgacggata tgaacagcac caacggtaca 480
ttcatcgaag acaaacgtct aattcctggt gttgctgctc ctgcctttcc cggaacacga 540
atcacctttg gagatacaaa tctagcaatt ttccgtgttt tcaagctcca agatagtga 600
gaatccatag agaaaccaac tacagagtaa 630

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&lt;210&gt; 1822

&lt;211&gt; 209

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

```

<400> 1822
Met Glu Ile Thr Ile Ser Gln Leu Cys Ser Arg Val Lys Phe Ser Ser
1      5      10      15

Ser Ser Ser Ser Ser Ser Leu Phe Cys Phe Tyr Gly Asn Ser Asn Arg
20      25      30

Asn Asn Leu Asn Gly Ala Val Ser Val Asn Cys Leu Arg Glu Asn Glu
35      40      45

Gln Ile Ser Asn Ile Ser Phe Ile Ala Lys Lys Pro Arg Ser His Ala
50      55      60

Pro Val Val Arg Thr Thr Arg Ala Ser Leu Asp Glu Asn Gln Ser Pro
65      70      75      80

Thr Ser Gly Gly Glu Arg Trp Leu Leu Lys Pro Val Gly Asp Gly Asp
85      90      95

```

047-E2F-PCT.ST25.txt

Thr Arg His Ile Gly Tyr Lys Val Ala Met Pro Ala Pro Phe Glu Ile  
100 105 110

Ser Ser Gly Gln Val Thr Ile Gly Arg Leu Pro Glu Lys Ala Asp Val  
115 120 125

Val Ile Pro Val Ala Thr Val Ser Gly Val His Ala Thr Ile Asn Thr  
130 135 140

Asn Glu Lys Asn Leu Leu Val Thr Asp Met Asn Ser Thr Asn Gly Thr  
145 150 155 160

Phe Ile Glu Asp Lys Arg Leu Ile Pro Gly Val Ala Ala Pro Ala Phe  
165 170 175

Pro Gly Thr Arg Ile Thr Phe Gly Asp Thr Asn Leu Ala Ile Phe Arg  
180 185 190

Val Phe Lys Leu Gln Asp Ser Glu Glu Ser Ile Glu Lys Pro Thr Thr  
195 200 205

Glu

<210> 1823

<211> 504

<212> DNA

<213> Arabidopsis thaliana

<400> 1823  
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accatcaaat catccgccac cgtcagaatc caaactgctg ctgttgcatc accgaagctt 120  
acagtgaagt catctctaaa gaacttcgga gtcgcggcgc tagcggctgc agcttcaatt 180  
gctttggccg gaaacgccat ggcaatagaa gttctcttgg gaggagggga tgggtcgtaa 240  
gcttttattc ccaacgactt ctctatagct aaaggagaga agattgtgtt caagaacaac 300  
gctggatacc cacacaatgt tgtcttcgat gaagacgaga tcccaagtgg cgtcgacgtg 360  
gccaaagtct cgatggacga gcaagatcta ctcaacggtg cgggagagac gtacgaggtt 420  
gctttgaccg agccaggacg ttacagcttc tactgtgcgc cacatcaggg tgctggtatg 480  
gtcggtaaag tcaccgttaa ctaa 504

&lt;210&gt; 1824

&lt;211&gt; 167

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1824

Met Ala Ser Val Thr Ser Ala Thr Val Ala Ile Pro Ser Phe Thr Gly  
 1 5 10 15

Leu Lys Ala Ser Thr Ile Lys Ser Ser Ala Thr Val Arg Ile Gln Thr  
 20 25 30

Ala Ala Val Ala Ser Pro Lys Leu Thr Val Lys Ser Ser Leu Lys Asn  
 35 40 45

Phe Gly Val Ala Ala Val Ala Ala Ala Ser Ile Ala Leu Ala Gly  
 50 55 60

Asn Ala Met Ala Ile Glu Val Leu Leu Gly Gly Gly Asp Gly Ser Leu  
 65 70 75 80

Ala Phe Ile Pro Asn Asp Phe Ser Ile Ala Lys Gly Glu Lys Ile Val  
 85 90 95

Phe Lys Asn Asn Ala Gly Tyr Pro His Asn Val Val Phe Asp Glu Asp  
 100 105 110

Glu Ile Pro Ser Gly Val Asp Val Ala Lys Ile Ser Met Asp Glu Gln  
 115 120 125

Asp Leu Leu Asn Gly Ala Gly Glu Thr Tyr Glu Val Ala Leu Thr Glu  
 130 135 140

Pro Gly Thr Tyr Ser Phe Tyr Cys Ala Pro His Gln Gly Ala Gly Met  
 145 150 155 160

Val Gly Lys Val Thr Val Asn  
 165

&lt;210&gt; 1825

&lt;211&gt; 1374

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

```

<400> 1825
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aacccaatga tccaactcgc taaacgttta tccaaaaagg gcatcaccag cacactcatc 120
atcgcttcca aagaccaccg tgaaccttac acctccgacg actactccat caccgtccac 180
accatccacg acggtttctt tccacatgaa caccctcacg ccaagttcgt agatcttgac 240
cgttttccaca actctacttc tcgaagcctg accgatttca tctctagtgc gaagtgtgcg 300
gacaatcctc caaaagcctt gatctatgat ccatttatgc ctttgcatt ggacatagcc 360
aaggacttgg atctatacgt agtggcatat ttactcaac catggttggc tagtcttgtt 420
tactaccata tcaacgaagg cactacgat gttcccgttg atagacacga gaaccaaca 480
cttgcatcgt ttcttggttt ccattgtta agccaagatg atctgccttc gttcgcctgc 540
gaaaaagggg cgtaccctct tctacacgag ttgtgtggtta ggcaattctc taatttattg 600
caagctgatt gcatttcttg caacactttt gatcaacttg aaccaagggt agtgaaatgg 660
atgaatgac aatggccggg gaagaacatt ggaccgggtg ttccatcgaa gttcttggat 720
aaccggttgc cagaagacaa agattacgaa ctcgagaact ccaagacaga gccagacgag 780
tctgttttga agtggttggg aaacaggccg gcgaagtcgg tggtttacgt ggcgtttggg 840
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atcgaagagg cagaggagaa agactctgga cttgtggcta agtgggttcc tcagctagag 1020
gttttagcac atgaatcaat cgggtgtttc gtgtcacact gtggatggaa ctcgacattg 1080
gaggcactat gcttaggggt tccaatgggt ggcgtgcctc agtggaactga tcagcccaca 1140
aatgctaagt ttatagagga tgtgtggaag attgggggta gagtgaggac cgatggagaa 1200
gggcttttca gtaaaagaa gattgcgaga tgcattgttg aggtcatgga aggagagaga 1260
gggaaagaga taaggagaa tgttgagaag cttaagggtg tggctcgcga agctatctct 1320
gaaggaggta gttccgacaa gaagattgat gagtttgttg ctcttttgac ttaa 1374

```

<210> 1826

<211> 457

<212> PRT

<213> Arabidopsis thaliana

<400> 1826

047-E2F-PCT.ST25.txt

Met Ser Glu Ala Lys Lys Gly His Val Leu Phe Phe Pro Tyr Pro Leu  
1 5 10 15

Gln Gly His Ile Asn Pro Met Ile Gln Leu Ala Lys Arg Leu Ser Lys  
20 25 30

Lys Gly Ile Thr Ser Thr Leu Ile Ile Ala Ser Lys Asp His Arg Glu  
35 40 45

Pro Tyr Thr Ser Asp Asp Tyr Ser Ile Thr Val His Thr Ile His Asp  
50 55 60

Gly Phe Phe Pro His Glu His Pro His Ala Lys Phe Val Asp Leu Asp  
65 70 75 80

Arg Phe His Asn Ser Thr Ser Arg Ser Leu Thr Asp Phe Ile Ser Ser  
85 90 95

Ala Lys Leu Ser Asp Asn Pro Pro Lys Ala Leu Ile Tyr Asp Pro Phe  
100 105 110

Met Pro Phe Ala Leu Asp Ile Ala Lys Asp Leu Asp Leu Tyr Val Val  
115 120 125

Ala Tyr Phe Thr Gln Pro Trp Leu Ala Ser Leu Val Tyr Tyr His Ile  
130 135 140

Asn Glu Gly Thr Tyr Asp Val Pro Val Asp Arg His Glu Asn Pro Thr  
145 150 155 160

Leu Ala Ser Phe Pro Gly Phe Pro Leu Leu Ser Gln Asp Asp Leu Pro  
165 170 175

Ser Phe Ala Cys Glu Lys Gly Ser Tyr Pro Leu Leu His Glu Phe Val  
180 185 190

Val Arg Gln Phe Ser Asn Leu Leu Gln Ala Asp Cys Ile Leu Cys Asn  
195 200 205

Thr Phe Asp Gln Leu Glu Pro Lys Val Val Lys Trp Met Asn Asp Gln  
210 215 220

Trp Pro Val Lys Asn Ile Gly Pro Val Val Pro Ser Lys Phe Leu Asp  
225 230 235 240

Asn Arg Leu Pro Glu Asp Lys Asp Tyr Glu Leu Glu Asn Ser Lys Thr  
245 250 255

047-E2F-PCT.ST25.txt

Glu Pro Asp Glu Ser Val Leu Lys Trp Leu Gly Asn Arg Pro Ala Lys  
260 265 270

Ser Val Val Tyr Val Ala Phe Gly Thr Leu Val Ala Leu Ser Glu Lys  
275 280 285

Gln Met Lys Glu Ile Ala Met Ala Ile Ser Gln Thr Gly Tyr His Phe  
290 295 300

Leu Trp Ser Val Arg Glu Ser Glu Arg Ser Lys Leu Pro Ser Gly Phe  
305 310 315 320

Ile Glu Glu Ala Glu Glu Lys Asp Ser Gly Leu Val Ala Lys Trp Val  
325 330 335

Pro Gln Leu Glu Val Leu Ala His Glu Ser Ile Gly Cys Phe Val Ser  
340 345 350

His Cys Gly Trp Asn Ser Thr Leu Glu Ala Leu Cys Leu Gly Val Pro  
355 360 365

Met Val Gly Val Pro Gln Trp Thr Asp Gln Pro Thr Asn Ala Lys Phe  
370 375 380

Ile Glu Asp Val Trp Lys Ile Gly Val Arg Val Arg Thr Asp Gly Glu  
385 390 395 400

Gly Leu Ser Ser Lys Glu Glu Ile Ala Arg Cys Ile Val Glu Val Met  
405 410 415

Glu Gly Glu Arg Gly Lys Glu Ile Arg Lys Asn Val Glu Lys Leu Lys  
420 425 430

Val Leu Ala Arg Glu Ala Ile Ser Glu Gly Gly Ser Ser Asp Lys Lys  
435 440 445

Ile Asp Glu Phe Val Ala Leu Leu Thr  
450 455

<210> 1827

<211> 753

<212> DNA

<213> Arabidopsis thaliana



<400> 1827  
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 ctttgtctat ccgacgattt tgtaaactct agagctactt attatggcag ccccgattgc 120  
 aaagcaaatc ctcggggaca ttgtgggtat ggagaatttg gaagagatat caataacggt 180  
 gaagtgagtg gtgtttcatg gcgactatgg aacaatggaa ctggctgtgg tgcttggtac 240  
 caggtgaggt gcaagatacc accacactgc agtgaggaag gagtatacgt agtggtacg 300  
 gactccggag aaggagatgg cacggacttc atcttaagcc ctaaggcgta cggacgtatg 360  
 gcgcgacccg gcacagaaaa tcagctctac tccttcggtg tagtcaacgt tgagtaccaa 420  
 aggatccctt gccgatacgc aggggtataat ctgggtgata agatccatga gaaaagctac 480  
 aatcctcatt atcttgccat ccttgtcttg tacgttggtg gtgttaatga catcctcgcc 540  
 gttgaagtct ggcaggagga ttgcaaagag tggagacgta tgagaagagt gtttgagcgg 600  
 gttcatgatt tgcaaatcc acctagaggc actctcacat tgaggttctt agtctacgga 660  
 agcgcaggaa tcaattggat ccaatcgcca aacgctattc ccgtgattg gactgccgga 720  
 gccacctacg actccaacat tctacttact taa 753

<210> 1828

<211> 250

<212> PRT

<213> Arabidopsis thaliana

<400> 1828

Met Lys His Ser His Val Leu Leu Leu Leu Phe Val Gln Val Ile Val  
 1 5 10 15

Leu Leu Pro Leu Leu Cys Leu Ser Asp Asp Phe Val Asn Ser Arg Ala  
 20 25 30

Thr Tyr Tyr Gly Ser Pro Asp Cys Lys Ala Asn Pro Arg Gly His Cys  
 35 40 45

Gly Tyr Gly Glu Phe Gly Arg Asp Ile Asn Asn Gly Glu Val Ser Gly  
 50 55 60

Val Ser Trp Arg Leu Trp Asn Asn Gly Thr Gly Cys Gly Ala Cys Tyr  
 65 70 75 80

Gln Val Arg Cys Lys Ile Pro Pro His Cys Ser Glu Glu Gly Val Tyr  
 85 90 95

047-E2F-PCT.ST25.txt

Val Val Ala Thr Asp Ser Gly Glu Gly Asp Gly Thr Asp Phe Ile Leu  
100 105 110

Ser Pro Lys Ala Tyr Gly Arg Met Ala Arg Pro Gly Thr Glu Asn Gln  
115 120 125

Leu Tyr Ser Phe Gly Val Val Asn Val Glu Tyr Gln Arg Ile Pro Cys  
130 135 140

Arg Tyr Ala Gly Tyr Asn Leu Val Tyr Lys Ile His Glu Lys Ser Tyr  
145 150 155 160

Asn Pro His Tyr Leu Ala Ile Leu Val Leu Tyr Val Gly Gly Val Asn  
165 170 175

Asp Ile Leu Ala Val Glu Val Trp Gln Glu Asp Cys Lys Glu Trp Arg  
180 185 190

Arg Met Arg Arg Val Phe Gly Ala Val His Asp Leu Gln Asn Pro Pro  
195 200 205

Arg Gly Thr Leu Thr Leu Arg Phe Leu Val Tyr Gly Ser Ala Gly Ile  
210 215 220

Asn Trp Ile Gln Ser Pro Asn Ala Ile Pro Ala Asp Trp Thr Ala Gly  
225 230 235 240

Ala Thr Tyr Asp Ser Asn Ile Leu Leu Thr  
245 250

<210> 1829

<211> 1359

<212> DNA

<213> Arabidopsis thaliana

<400> 1829  
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tcctttacaca gtcactcacg gtatttcttc tcctcagtcg aactcggccg agtcggctca 120  
tcattctcgg cgatcacatc ggtctcgagg acgacagtga atgaaatctg caccgaggat 180  
gaacttcaact acgttcctgt tcccaactcc gattggcgcg tcgctctctg gcgatatctt 240  
ccttcccaa aggcaccgaa gaggaaccat cctttgcttc tattgtctgg gattgggacc 300  
aatgctgtta catacgatct ttcccctgag tgttccttgg caagatccat gtctggatca 360  
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```

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acaaatcttg gtaaaggcaa taaccagcag cggatagtct cgaatctatt ggagaatttc 480
ataagtgtat ctgaaaggct ggaaaatggt cttgatggag gttccaagat ccttgggatg 540
caagaccgtc tatcgaagag agcggggagat ttcaagcagc ggtttgaact tatccctcat 600
tacaattggg attttgataa ctatctagaa gaagatgttc cttctgcgat ggactatgta 660
aggactcaaa ccaagtcaaa agatggaaaag ttgctagcag ttggtcactc aatgggtggt 720
atcttgttat atgccttgct ctcaagatgt ggctttaaag gaatggattc aggtttggct 780
ggtgtcacca ctctcgcac aacatttgac tattcatcct caggaacact cctcaagtac 840
ctattaccaa tgaagagacc tgcacaagct attaaccttc ctatcatgcc aattgacaca 900
atgctcgcta tggctcacc tctaagtgt cgtcctccat attctttgct ctggttaacc 960
gctaatatct ctgctcctcaaatgatggac cctgaagtta ttgagaagct tgttttgaa 1020
agcttatgca cagtaccagt caagcttctc ttgcagctaa caacagccgt ggaccacggt 1080
gggttgcgtg acagaaccgg tactttctgt tacaaggatc atatcagcaa acaaatgtg 1140
cctatcttag ctcttcgagg ggactgggac ataatctgcc ctcccgatgc agtatacgat 1200
actgtaaagc tgattccaga acatctagcc acttacaag ttgtaggatc acccgagggt 1260
ccacattatg gccaccagga tctaatttcg ggtcgaacgg ctcggaacga agtatatcct 1320
ctgattacta gatttcttca acaacaagat gagagttaa 1359

```

<210> 1830

<211> 452

<212> PRT

<213> Arabidopsis thaliana

<400> 1830

```

Met Asp Thr Leu Arg Phe Glu Leu Ser Ser Ala Ser Phe Thr Ser Ala
1      5      10      15

```

```

Val Thr Ala Ser Ser Leu His Ser His Ser Arg Tyr Phe Phe Ser Ser
20      25      30

```

```

Val Gln Leu Gly Arg Val Gly Ser Ser Ser Pro Ala Ile Thr Ser Val
35      40      45

```

```

Ser Arg Thr Thr Val Asn Glu Ile Cys Thr Ala Asp Glu Leu His Tyr
50      55      60

```

047-E2F-PCT.ST25.txt

Val Pro Val Pro Asn Ser Asp Trp Arg Val Ala Leu Trp Arg Tyr Leu  
65 70 75 80

Pro Ser Pro Lys Ala Pro Lys Arg Asn His Pro Leu Leu Leu Leu Ser  
85 90 95

Gly Ile Gly Thr Asn Ala Val Thr Tyr Asp Leu Ser Pro Glu Cys Ser  
100 105 110

Phe Ala Arg Ser Met Ser Gly Ser Gly Phe Asp Thr Trp Ile Leu Glu  
115 120 125

Leu Arg Gly Ala Gly Leu Ser Ser Leu Ser Val Asp Thr Asn Leu Gly  
130 135 140

Lys Gly Asn Asn Gln Gln Arg Ile Val Ser Asn Leu Leu Glu Asn Phe  
145 150 155 160

Ile Ser Val Ser Glu Arg Leu Glu Asn Val Leu Asp Gly Gly Ser Lys  
165 170 175

Ile Leu Gly Met Gln Asp Arg Leu Ser Lys Arg Ala Gly Asp Phe Lys  
180 185 190

Gln Arg Phe Glu Leu Ile Pro His Tyr Asn Trp Asp Phe Asp Asn Tyr  
195 200 205

Leu Glu Glu Asp Val Pro Ser Ala Met Asp Tyr Val Arg Thr Gln Thr  
210 215 220

Lys Ser Lys Asp Gly Lys Leu Leu Ala Val Gly His Ser Met Gly Gly  
225 230 235 240

Ile Leu Leu Tyr Ala Leu Leu Ser Arg Cys Gly Phe Lys Gly Met Asp  
245 250 255

Ser Gly Leu Ala Gly Val Thr Thr Leu Ala Ser Thr Phe Asp Tyr Ser  
260 265 270

Ser Ser Gly Thr Leu Leu Lys Tyr Leu Leu Pro Met Lys Glu Pro Ala  
275 280 285

Gln Ala Ile Asn Leu Pro Ile Met Pro Ile Asp Thr Met Leu Ala Met  
290 295 300

Ala His Pro Leu Met Cys Arg Pro Pro Tyr Ser Leu Ser Trp Leu Thr  
305 310 315 320

Ala Asn Ile Ser Ala Pro Gln Met Met Asp Pro Glu Val Ile Glu Lys  
 325 330 335

Leu Val Leu Asn Ser Leu Cys Thr Val Pro Val Lys Leu Leu Leu Gln  
 340 345 350

Leu Thr Thr Ala Val Asp His Gly Gly Leu Arg Asp Arg Thr Gly Thr  
 355 360 365

Phe Cys Tyr Lys Asp His Ile Ser Lys Thr Asn Val Pro Ile Leu Ala  
 370 375 380

Leu Ala Gly Asp Trp Asp Ile Ile Cys Pro Pro Asp Ala Val Tyr Asp  
 385 390 395 400

Thr Val Lys Leu Ile Pro Glu His Leu Ala Thr Tyr Lys Val Val Gly  
 405 410 415

Ser Pro Gly Gly Pro His Tyr Gly His Gln Asp Leu Ile Ser Gly Arg  
 420 425 430

Thr Ala Arg Asn Glu Val Tyr Pro Leu Ile Thr Arg Phe Leu Gln Gln  
 435 440 445

Gln Asp Glu Ser  
 450

<210> 1831

<211> 1014

<212> DNA

<213> Arabidopsis thaliana

<400> 1831  
 atggcgaagg aagcgggtcaa gtatgtatgg gaaggagcaa ttccctctgca gattcatctc 60  
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 ataggatatt tgccctctgtt gattcctctt ataaagcctt atttcaagga ttcacttcct 180  
 cctggtgaag attcaatttg gtttgattac aaaggatttc ctctaaaatg gtatatacca 240  
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 cactttagag gatatccttg caacatactg ataccatgtg aaggagaaga ttctgtaaaa 360  
 tggaaacttg ttaattcttt gaaagaggca caatatatca tcaatggaaa ttgcaagaat 420

```

gttatgaaca tgtctcagag tgatcaagag gatctatgga cctctgtcat gaacggtgat 480
ctttgatgct atacaagatt atcacccaag cttaaaatgg gaacagtcga agatgagttt 540
tcaaggaaaa caagtttgtc atctccacaa tctcaacaag ttgtgcctga gacggagggtg 600
gctggacaag ttaagacagc aagaattcct gttcggttgt atgttcgaag tctaaataaa 660
gatttcgaga atcttgaaga tgtaccggag atcgatacct gggatgacat ctcgtacctt 720
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atacaagga tagaaatgaa gctagagata ccgttttctg ggggtggtaaa taacttgatg 960
aaccagaat tctatctcca tatctctgtc cttgtgaaag ctctcaaaag gtga 1014

```

&lt;210&gt; 1832

&lt;211&gt; 337

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1832

```

Met Ala Lys Glu Ala Val Lys Tyr Val Trp Glu Gly Ala Ile Pro Leu
1      5      10      15

```

```

Gln Ile His Leu His Lys Ser Asp Val Ala Ser His Pro Ala Pro Pro
20      25      30

```

```

Pro Ala Leu Val Leu Ala Pro Arg Ile Gly Tyr Leu Pro Leu Leu Ile
35      40      45

```

```

Pro Leu Ile Lys Pro Tyr Phe Lys Asp Ser Leu Pro Pro Gly Glu Asp
50      55      60

```

```

Ser Ile Trp Phe Asp Tyr Lys Gly Phe Pro Leu Lys Trp Tyr Ile Pro
65      70      75      80

```

```

Thr Gly Val Leu Phe Asp Leu Leu Cys Ala Glu Pro Glu Arg Pro Trp
85      90      95

```

```

Asn Leu Thr Ile His Phe Arg Gly Tyr Pro Cys Asn Ile Leu Ile Pro
100     105     110

```

```

Cys Glu Gly Glu Asp Ser Val Lys Trp Asn Phe Val Asn Ser Leu Lys
115     120     125

```

047-E2F-PCT.ST25.txt

Glu Ala Gln Tyr Ile Ile Asn Gly Asn Cys Lys Asn Val Met Asn Met  
 130 135 140  
 Ser Gln Ser Asp Gln Glu Asp Leu Trp Thr Ser Val Met Asn Gly Asp  
 145 150 155 160  
 Leu Asp Ala Tyr Thr Arg Leu Ser Pro Lys Leu Lys Met Gly Thr Val  
 165 170 175  
 Glu Asp Glu Phe Ser Arg Lys Thr Ser Leu Ser Ser Pro Gln Ser Gln  
 180 185 190  
 Gln Val Val Pro Glu Thr Glu Val Ala Gly Gln Val Lys Thr Ala Arg  
 195 200 205  
 Ile Pro Val Arg Leu Tyr Val Arg Ser Leu Asn Lys Asp Phe Glu Asn  
 210 215 220  
 Leu Glu Asp Val Pro Glu Ile Asp Thr Trp Asp Asp Ile Ser Tyr Leu  
 225 230 235 240  
 Asn Arg Pro Val Glu Phe Leu Lys Glu Glu Gly Lys Cys Phe Thr Leu  
 245 250 255  
 Arg Asp Ala Ile Lys Ser Leu Leu Pro Glu Phe Met Gly Asp Arg Ala  
 260 265 270  
 Gln Thr Ser Gly Glu Glu Arg Ser Ile Asp Asp Thr Glu Glu Ala Asp  
 275 280 285  
 Gly Ser Arg Glu Met Gly Glu Ile Lys Leu Val Arg Ile Gln Gly Ile  
 290 295 300  
 Glu Met Lys Leu Glu Ile Pro Phe Ser Trp Val Val Asn Asn Leu Met  
 305 310 315 320  
 Asn Pro Glu Phe Tyr Leu His Ile Ser Val Leu Val Lys Ala Pro Gln  
 325 330 335

Arg

<210> 1833

<211> 1206

<212> DNA

<213> *Arabidopsis thaliana*

```

<400> 1833
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agagctgaaa agatatccac cctgttgacc atcaaggaac agagaagaca gaaaccgcga 180
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ccggagcaaa agaagactga gagaaaaagg actgcagtga tctctggagc ttcgtctggt 300
ttaggtttag ctacggccaa agcttttagca gacacagggg aatggcatgt gatcatggct 360
tgaggaactt ttctcaaggc cgagaaggca gcgagatctg ttggaatgtc caaggaagat 420
tacacagtga tgcattctga tcttgcttcg cttgaaagcg tgaagcaatt cgttgaaaaa 480
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actgctaaag agccttcttt tacagctgaa ggctttgaga taagcgttgg aaccaaccat 600
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tcaaaacgta tgatcatcgt aggatctata acaggaaaca caaatacttt ggctgggaat 720
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aacagttcaa tgatagatgg aggagagttt gatggagcaa aggcttacaa agacagcaaa 840
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acgtttgctt ctctttaccg tggttgcacg gctacaacag ggtgttctag agaacacata 960
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gcaagtgatg cggagaaggc aaagaaaactg tgggaggtta gcgagaagct tgttggtttg 1200
gcatga 1206

```

&lt;210&gt; 1834

&lt;211&gt; 401

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1834

```

Met Ala Leu Gln Ala Ala Tyr Ser Leu Leu Pro Ser Thr Ile Ser Ile
1          5          10          15

```



047-E2F-PCT.ST25.txt

Gln Lys Glu Gly Lys Phe Asn Ala Ser Leu Lys Glu Thr Thr Phe Thr  
20 25 30

Gly Ser Ser Phe Ser Asn His Leu Arg Ala Glu Lys Ile Ser Thr Leu  
35 40 45

Leu Thr Ile Lys Glu Gln Arg Arg Gln Lys Pro Arg Phe Ser Thr Gly  
50 55 60

Ile Arg Ala Gln Thr Val Thr Ala Thr Pro Pro Ala Asn Glu Ala Ser  
65 70 75 80

Pro Glu Gln Lys Lys Thr Glu Arg Lys Gly Thr Ala Val Ile Thr Gly  
85 90 95

Ala Ser Ser Gly Leu Gly Leu Ala Thr Ala Lys Ala Leu Ala Asp Thr  
100 105 110

Gly Lys Trp His Val Ile Met Ala Cys Arg Asn Phe Leu Lys Ala Glu  
115 120 125

Lys Ala Ala Arg Ser Val Gly Met Ser Lys Glu Asp Tyr Thr Val Met  
130 135 140

His Leu Asp Leu Ala Ser Leu Glu Ser Val Lys Gln Phe Val Glu Asn  
145 150 155 160

Phe Arg Arg Thr Glu Gln Pro Leu Asp Val Leu Val Cys Asn Ala Ala  
165 170 175

Val Tyr Gln Pro Thr Ala Lys Glu Pro Ser Phe Thr Ala Glu Gly Phe  
180 185 190

Glu Ile Ser Val Gly Thr Asn His Leu Gly His Phe Leu Leu Ser Arg  
195 200 205

Leu Leu Leu Asp Asp Leu Lys Lys Ser Asp Tyr Pro Ser Lys Arg Met  
210 215 220

Ile Ile Val Gly Ser Ile Thr Gly Asn Thr Asn Thr Leu Ala Gly Asn  
225 230 235 240

Val Pro Pro Lys Ala Asn Leu Gly Asp Leu Arg Gly Leu Ala Ser Gly  
245 250 255

Leu Asn Gly Gln Asn Ser Ser Met Ile Asp Gly Gly Glu Phe Asp Gly  
Page 2699

Ala Lys Ala Tyr Lys Asp Ser Lys Val Cys Asn Met Leu Thr Met Gln  
275 280

Glu Leu His Arg Arg Tyr His Glu Glu Thr Gly Val Thr Phe Ala Ser  
290 295 300

Leu Tyr Pro Gly Cys Ile Ala Thr Thr Gly Leu Phe Arg Glu His Ile  
305 310 315 320

Pro Leu Phe Arg Leu Leu Phe Pro Pro Phe Gln Lys Tyr Ile Thr Lys  
325 330 335

Gly Tyr Val Ser Glu Glu Glu Ala Gly Lys Arg Leu Ala Gln Val Val  
340 345 350

Ser Asp Pro Ser Leu Gly Lys Ser Gly Val Tyr Trp Ser Trp Asn Asn  
355 360 365

Asn Ser Ser Ser Phe Glu Asn Gln Leu Ser Lys Glu Ala Ser Asp Ala  
370 375 380

Glu Lys Ala Lys Lys Leu Trp Glu Val Ser Glu Lys Leu Val Gly Leu  
385 390 395 400

Ala

<210> 1835

<211> 822

<212> DNA

<213> Arabidopsis thaliana

<400> 1835

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cagcgttctc acagcccttc ttctgttctt tctcaccgc ctgcgtctcg acccaaatcc	180
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tcaaagaacc ttccgtacaa gtgtaacgtc tgtgaaaaag cgtttccttc ctatcaggct	360
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aatcaatca gtcacagtg aagcgtgtcg agcacgggat cggaagaag gagccaccgt	660
ggattcatcg atctaaacct accggcgta cctgaactca gccttcacat caatccaatc	720
gtcgcgaag agatcttgag tccgttgacc ggtaaaaaac cgctttgtt gaccgatcac	780
gaccaagtca tcaagaaaga agatttatct ttaaaaatct aa	822

&lt;210&gt; 1836

&lt;211&gt; 273

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1836

Met Ala Leu Glu	Ala Met Asn Thr Pro Thr Ser Ser Phe Thr Arg Ile
1	5 10 15

Glu Thr Lys Glu Asp Leu Met Asn Asp Ala Val Phe Ile Glu Pro Trp
20 25 30

Leu Lys Arg Lys Arg Ser Lys Arg Gln Arg Ser His Ser Pro Ser Ser
35 40 45

Ser Ser Ser Ser Pro Pro Arg Ser Arg Pro Lys Ser Gln Asn Gln Asp
50 55 60

Leu Thr Glu Glu Glu Tyr Leu Ala Leu Cys Leu Leu Met Leu Ala Lys
65 70 75 80

Asp Gln Pro Ser Gln Thr Arg Phe His Gln Gln Ser Gln Ser Leu Thr
85 90 95

Pro Pro Pro Glu Ser Lys Asn Leu Pro Tyr Lys Cys Asn Val Cys Glu
100 105 110

Lys Ala Phe Pro Ser Tyr Gln Ala Leu Gly Gly His Lys Ala Ser His
115 120 125

Arg Ile Lys Pro Pro Thr Val Ile Ser Thr Thr Ala Asp Asp Ser Thr
130 135 140

047-E2F-PCT.ST25.txt

Ala Pro Thr Ile Ser Ile Val Ala Gly Glu Lys His Pro Ile Ala Ala  
145 150 155 160

Ser Gly Lys Ile His Glu Cys Ser Ile Cys His Lys Val Phe Pro Thr  
165 170 175

Gly Gln Ala Leu Gly Gly His Lys Arg Cys His Tyr Glu Gly Asn Leu  
180 185 190

Gly Gly Gly Gly Gly Gly Ser Lys Ser Ile Ser His Ser Gly Ser  
195 200 205

Val Ser Ser Thr Val Ser Glu Glu Arg Ser His Arg Gly Phe Ile Asp  
210 215 220

Leu Asn Leu Pro Ala Leu Pro Glu Leu Ser Leu His His Asn Pro Ile  
225 230 235 240

Val Asp Glu Glu Ile Leu Ser Pro Leu Thr Gly Lys Lys Pro Leu Leu  
245 250 255

Leu Thr Asp His Asp Gln Val Ile Lys Lys Glu Asp Leu Ser Leu Lys  
260 265 270

Ile

<210> 1837

<211> 798

<212> DNA

<213> Arabidopsis thaliana

<400> 1837

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cagatgaggc agctggaaga actcactgac aaaatgcgtg actgtaagag ccttattaaa	180
gatttcgata gggaaatcaa aagcttggaa agcggtaatg atgccagcac taaccggatg	240
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aaatactcat caaacctagc aagcaataac aagcgagtag atcttttcga tggacctgga	360
gaagaacaca tggaagaaaa tgtcttatta gcttcaaaca tgtccaatca agagttaatg	420
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## 047-E2F-PCT.ST25.txt

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 aagctgggtca aggaaattgg taggcagggt gccactgaca aatgtattat ggcatttctt 660  
 ttccattatcg tcattgggtg catagcaatc atcatcgta agattgtgaa cccaacaac 720  
 aaagacattc gcgacatacc ggggtgtgggc ctagctccac cagccatgaa cagacgtctg 780  
 ctctggaacc attactga 798

<210> 1838

<211> 265

<212> PRT

<213> Arabidopsis thaliana

<400> 1838

Met Asp Pro Ile Ser Ala Val Ser Glu Glu Leu Ala Glu Ile Glu Gly  
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Gln Ile Asn Asp Ile Phe Arg Ala Leu Ser Asn Gly Phe Gln Lys Leu  
 20 25 30

Glu Lys Ile Lys Asp Ala Asn Arg Gln Ser Arg Gln Leu Glu Glu Leu  
 35 40 45

Thr Asp Lys Met Arg Asp Cys Lys Ser Leu Ile Lys Asp Phe Asp Arg  
 50 55 60

Glu Ile Lys Ser Leu Glu Ser Gly Asn Asp Ala Ser Thr Asn Arg Met  
 65 70 75 80

Leu Asn Asp Arg Arg Gln Ser Met Val Lys Glu Leu Asn Ser Tyr Val  
 85 90 95

Ala Leu Lys Lys Lys Tyr Ser Ser Asn Leu Ala Ser Asn Asn Lys Arg  
 100 105 110

Val Asp Leu Phe Asp Gly Pro Gly Glu Glu His Met Glu Glu Asn Val  
 115 120 125

Leu Leu Ala Ser Asn Met Ser Asn Gln Glu Leu Met Asp Lys Gly Asn  
 130 135 140

Ser Met Met Asp Asp Thr Asp Gln Ala Ile Glu Arg Gly Lys Lys Ile  
 Page 2703

145 150 155 160

Val Gln Glu Thr Ile Asn Val Gly Thr Asp Thr Ser Ala Ala Leu Lys  
165 170 175

Ala Gln Thr Glu Gln Met Ser Arg Val Val Asn Glu Leu Asp Ser Ile  
180 185 190

His Phe Ser Leu Lys Lys Ala Ser Lys Leu Val Lys Glu Ile Gly Arg  
195 200 205

Gln Val Ala Thr Asp Lys Cys Ile Met Ala Phe Leu Phe Leu Ile Val  
210 215 220

Ile Gly Val Ile Ala Ile Ile Ile Val Lys Ile Val Asn Pro Asn Asn  
225 230 235 240

Lys Asp Ile Arg Asp Ile Pro Gly Val Gly Leu Ala Pro Pro Ala Met  
245 250 255

Asn Arg Arg Leu Leu Trp Asn His Tyr  
260 265

<210> 1839

<211> 1233

<212> DNA

<213> Arabidopsis thaliana

<400> 1839

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aaaccaatcg gaggaatcgg agagggagcg aatctgtatct ccggtcgta cttctgtcca	180
attcttcttc tcgattcgtc ggcgatcaac ggaggagaga aaagagaaat tctcaaaccg	240
gttaaagccg ccgctgctga aggtggagat accgctgggg atgctaaagt tggattcctc	300
gccaaagtatc catggctagt cactggattc ttcttcttca tgtggtactt cttgaatgtg	360
attttcaaca tccttaacaa gaagatctat aattacttcc ctatcccta tttgtatcg	420
gtgatacact tgttcgtggg agttgtttac tgcttgatca gctggtccgt gggcttcct	480
aaacgtgccc cgattgactc gaacctctc aaggtattga taccagtcgc agtctgtcac	540
gccttaggcc atgtcactag caatgtctct ttgctgcggt ttgtgtctc cttcactcac	600
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<210> 1840

<211> 410

<212> PRT

<213> Arabidopsis thaliana

<400> 1840

Met Glu Ser Arg Val Leu Leu Arg Ala Thr Ala Asn Val Val Gly Ile  
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Pro Lys Leu Arg Arg Pro Ile Gly Ala Ile His Arg Gln Phe Ser Thr  
20 25 30

Ala Ser Ser Ser Phe Ser Val Lys Pro Ile Gly Gly Ile Gly Glu  
35 40 45

Gly Ala Asn Leu Ile Ser Gly Arg Gln Leu Arg Pro Ile Leu Leu Leu  
50 55 60

Asp Ser Ser Ala Ile Asn Gly Gly Glu Lys Arg Glu Ile Leu Lys Pro  
65 70 75 80

Val Lys Ala Ala Ala Ala Glu Gly Gly Asp Thr Ala Gly Asp Ala Lys  
85 90 95

Val Gly Phe Leu Ala Lys Tyr Pro Trp Leu Val Thr Gly Phe Phe Phe  
100 105 110

Phe Met Trp Tyr Phe Leu Asn Val Ile Phe Asn Ile Leu Asn Lys Lys  
Page 2705

115 120 047-E2F-PCT.ST25.txt  
125

Ile Tyr Asn Tyr Phe Pro Tyr Pro Tyr Phe Val Ser Val Ile His Leu  
130 135 140

Phe Val Gly Val Val Tyr Cys Leu Ile Ser Trp Ser Val Gly Leu Pro  
145 150 155 160

Lys Arg Ala Pro Ile Asp Ser Asn Leu Leu Lys Val Leu Ile Pro Val  
165 170 175

Ala Val Cys His Ala Leu Gly His Val Thr Ser Asn Val Ser Phe Ala  
180 185 190

Ala Val Ala Val Ser Phe Thr His Thr Ile Lys Ala Leu Glu Pro Phe  
195 200 205

Phe Asn Ala Ala Ala Ser Gln Phe Ile Met Gly Gln Ser Ile Pro Ile  
210 215 220

Thr Leu Trp Leu Ser Leu Ala Pro Val Val Leu Gly Val Ala Met Ala  
225 230 235 240

Ser Leu Thr Glu Leu Ser Phe Asn Trp Leu Gly Phe Ile Ser Ala Met  
245 250 255

Ile Ser Asn Ile Ser Phe Thr Tyr Arg Ser Ile Phe Ser Lys Lys Ala  
260 265 270

Met Thr Asp Met Asp Ser Thr Asn Val Tyr Ala Tyr Ile Ser Ile Ile  
275 280 285

Ala Leu Phe Val Cys Ile Pro Pro Ala Ile Ile Val Glu Gly Pro Lys  
290 295 300

Leu Leu Asn His Gly Phe Ala Asp Ala Ile Ala Lys Val Gly Met Thr  
305 310 315 320

Lys Phe Ile Ser Asp Leu Phe Trp Val Gly Met Phe Tyr His Leu Tyr  
325 330 335

Asn Gln Leu Ala Thr Asn Thr Leu Glu Arg Val Ala Pro Leu Thr His  
340 345 350

Ala Val Gly Asn Val Leu Lys Arg Val Phe Val Ile Gly Phe Ser Ile  
355 360 365



Val Ile Phe Gly Asn Lys Ile Ser Thr Gln Thr Gly Ile Gly Thr Gly  
 370 375 380

Ile Ala Ile Ala Gly Val Ala Met Tyr Ser Ile Ile Lys Ala Lys Ile  
 385 390 395 400

Glu Glu Glu Lys Arg Gln Gly Lys Lys Ala  
 405 410

<210> 1841

<211> 1215

<212> DNA

<213> Arabidopsis thaliana

<400> 1841  
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 gaaactgttg cgatcgagaa aacagagaag ccaagaactt ttccggttcc gttgtgtgaa 180  
 actgatggtg atgaagatga cgaagtagct gacctaatc aagaatcaat caagcttgag 240  
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 gaggtgggtg agagcaagcg taagggttca aagaatatgt tcaaatcaga gaaagagttt 420  
 ttggaattta tgctcaagta tcagcaagtc ctttctgaaa gagattctgc tattactggt 480  
 cgtgacaagc ttgaatcact ttgtagagag ttacaacgct agaacaaat gttaatggaa 540  
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 caactcaaag aaaatgagat gtttaaggacg aagttgaagc acctgggtga tcaatttatg 720  
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gctgttcaac catga

&lt;210&gt; 1842

&lt;211&gt; 404

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1842

Met Glu Ser Pro His Ser Asn Leu Leu Pro Glu Val Asp Ser Leu Pro  
1 5 10 15Asp Gly Phe Val Asp Gly Ala Thr Glu Pro Pro Leu Asn Ser Pro Lys  
20 25 30Thr Gln Glu Glu Thr Thr Asn His Glu Thr Val Ala Ile Glu Lys Thr  
35 40 45Glu Lys Pro Arg Thr Phe Pro Val Pro Leu Cys Glu Thr Asp Gly Asn  
50 55 60Glu Asp Asp Glu Val Ala Asp Leu Ile Gln Glu Ser Ile Lys Leu Glu  
65 70 75 80Leu Glu Phe Glu Gln Lys Glu Lys Glu Ala Ser Pro Pro Ile Ser Gln  
85 90 95Thr Leu Ser Glu Gly Ser Thr Gln Asn Ser Thr Leu Ser Lys Glu Met  
100 105 110Asp Ser Leu Lys Pro Lys Lys Gln Glu Val Val Glu Ser Lys Arg Lys  
115 120 125Gly Ser Lys Asn Met Phe Lys Ser Glu Lys Glu Phe Leu Glu Phe Met  
130 135 140Leu Lys Tyr Gln Gln Val Leu Ser Glu Arg Asp Ser Ala Ile Thr Val  
145 150 155 160Arg Asp Lys Leu Glu Ser Leu Cys Arg Glu Leu Gln Arg Gln Asn Lys  
165 170 175Met Leu Met Glu Glu Cys Lys Arg Val Ser Thr Glu Gly Gln Thr Leu  
180 185 190

Arg Ser Asp Leu Ser Thr Lys Phe Gln Asp Ala Ile Met Asp Val Ser  
 195 200 205

Ile Lys Leu Asp Glu Gln Lys Asn Glu Ser Leu Thr Gln Leu Lys Glu  
 210 215 220

Asn Glu Met Leu Arg Thr Lys Leu Lys His Leu Ala Asp Gln Phe Met  
 225 230 235 240

Leu Ser Glu Gln Gln His Glu Gln Arg Leu Lys Gln Lys Thr Leu Glu  
 245 250 255

Leu Gln Ile Ser Ala Leu Lys Ile Lys Gln His Glu Glu Lys Leu Ile  
 260 265 270

His Glu Gln Ser Gln Met Lys Val Tyr Ala Asp Gln Val Ser Gln Leu  
 275 280 285

Leu Ser Thr Glu Lys Asn Leu Arg Leu Gln Leu Thr Ser Asp Gly Asp  
 290 295 300

Lys Phe Gln Gln Phe Gln Asp Ala Leu Val Lys Ser Asn Glu Val Phe  
 305 310 315 320

Glu Thr Phe Lys Gln Glu Ile Asp Lys Met Ser Lys Ala Ile Lys Glu  
 325 330 335

Leu Arg Lys Glu Asn Ala Phe Leu Lys Asn Lys Thr Glu Lys Ser Asp  
 340 345 350

Ile Thr Leu Ile Glu Leu Val Glu Glu Arg Glu Arg Leu Lys Lys Leu  
 355 360 365

Leu Glu Lys Thr Lys Lys Gln Lys Asp Lys Leu Glu Ser Leu Cys Arg  
 370 375 380

Ser Leu Gln Ala Glu Arg Lys Gln Lys Glu Thr Asn Ser Thr Asp Ser  
 385 390 395 400

Ala Val Gln Pro

<210> 1843

<211> 993

<212> DNA

<213> Arabidopsis thaliana

<400> 1843  
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 caccggattc tagttgaaga agatgcacaa gagttgacag aactatatcg tgcttcggga 420  
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 gaattcataa gggaaaaagt gagtgatgaa ggtcgttttg aagatttgca taaaggcaaa 840  
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 catatctcta atttcgtttt gtacacagat tga 993

<210> 1844

<211> 330

<212> PRT

<213> *Arabidopsis thaliana*

<400> 1844

Met Gly Ser Ile Ser Met His Ile Thr Pro Ser Thr Ala Leu Pro Ile  
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Arg His Phe Arg Ala Arg Val Ser Cys Cys Ser Ser Gly His Val Ser  
 20 25 30

Phe Ile Lys Asp Val Ala Ala Thr Glu Pro Pro Met His Leu His His  
 35 40 45

047-E2F-PCT.ST25.txt

Leu Leu Lys Val Leu Gln Thr Arg Gly Glu Thr Ile Ile Ser Pro Gly  
50 55 60

Ala Lys Gln Gly Leu Ile Pro Leu Ala Ile Pro Leu Ser Lys Asn Ser  
65 70 75 80

Ser Gly Ser Val Thr Ala Leu Leu Arg Trp Pro Thr Ala Pro Pro Gly  
85 90 95

Met Asp Met Pro Val Val Glu Val Trp Arg Ser Gly Val Arg Leu Ile  
100 105 110

Ala Arg Asn Val Asp Glu Tyr Ile His Arg Ile Leu Val Glu Glu Asp  
115 120 125

Ala Gln Glu Leu Thr Glu Leu Tyr Arg Ala Ser Gly Glu Ala Gly Glu  
130 135 140

Lys Leu Tyr Glu Lys Gly Ala Phe Ala Glu Ser Glu Ile Asp Asn Leu  
145 150 155 160

Asp Val Tyr Val Leu Lys Lys Val Gly Leu Phe Pro Asp Leu Leu Glu  
165 170 175

Arg Lys Val Leu Arg His Phe Asp Glu Gly Asp His Val Ser Ala Met  
180 185 190

Val Thr Gly Glu Phe Tyr Thr Lys Lys Asp Leu Phe Pro Gly Phe Gly  
195 200 205

Arg Pro Phe Val Tyr Tyr Ala Asn Ile Leu Gln Lys Val Gly Arg Asn  
210 215 220

Val Glu Ala Lys Asp Ala Ala Arg Val Ala Leu Arg Ser Pro Trp Trp  
225 230 235 240

Thr Leu Gly Cys Pro Tyr Glu Glu Val Ala Ser Ile Ala Gln Trp Glu  
245 250 255

Asp Glu Gln Ile Glu Phe Ile Arg Glu Lys Val Ser Asp Glu Gly Arg  
260 265 270

Phe Glu Asp Leu His Lys Gly Lys Ala Pro Ile Gln Val Ala Leu Asp  
275 280 285

Val Ala Ala Phe Leu Leu Asp Leu Ala Ser Ile Glu Gly Thr Trp Ser  
290 295 300

047-E2F-PCT.ST25.txt

Glu Ser Leu Asn His Ile Ala Lys Cys Tyr Glu Glu Ala Gly Leu His  
305 310 315 320

His Ile Ser Asn Phe Val Leu Tyr Thr Asp  
325 330

<210> 1845

<211> 735

<212> DNA

<213> Arabidopsis thaliana

<400> 1845  
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tcgggtgagc aagcttgtag tgcttatgtg atgtttaagg attcttattc tcaagaaact 180  
gctgttttac tcactggcgc aacgatattg gatcagcgtg ttgtataac tcgttgggga 240  
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gactcacaac attatgtcga acgaagcgag ttcaacgctg gagaagcagt gacaaaagct 360  
caagaagtgg tgaataataa gcttgccaca ggattcgtgc taggcaaaga cgctttaagc 420  
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caactagaac agaggattgg tcttactgac aaaatcttta ccggacttga agctgttaga 540  
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agaaccgcgg cagcagctgc aactagtgtt gtcaatagca gttacttctc cagcggagct 660  
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ggctcaaggc agtga 735

<210> 1846

<211> 244

<212> PRT

<213> Arabidopsis thaliana

<400> 1846

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Ser Val Thr His Asn Asp Leu Ile Asp Phe Phe Ser Phe Ser Gly Thr  
 20 25 30  
 Ile Gln Asp Ile Asp Ile Val Arg Ser Gly Glu Gln Ala Cys Thr Ala  
 35 40 45  
 Tyr Val Met Phe Lys Asp Ser Tyr Ser Gln Glu Thr Ala Val Leu Leu  
 50 55 60  
 Thr Gly Ala Thr Ile Leu Asp Gln Arg Val Cys Ile Thr Arg Trp Gly  
 65 70 75 80  
 Gln His His Glu Glu Phe Asp Phe Trp Asn Ala Thr Ser Arg Gly Phe  
 85 90 95  
 Glu Asp Glu Ser Asp Ser Gln His Tyr Ala Gln Arg Ser Glu Phe Asn  
 100 105 110  
 Ala Gly Glu Ala Val Thr Lys Ala Gln Glu Val Val Lys Ile Met Leu  
 115 120 125  
 Ala Thr Gly Phe Val Leu Gly Lys Asp Ala Leu Ser Lys Ala Lys Ala  
 130 135 140  
 Phe Asp Glu Ser His Gly Val Ser Ala Ala Ala Val Ala Arg Val Ser  
 145 150 155 160  
 Gln Leu Glu Gln Arg Ile Gly Leu Thr Asp Lys Ile Phe Thr Gly Leu  
 165 170 175  
 Glu Ala Val Arg Met Thr Asp Gln Arg Tyr His Val Ser Asp Thr Ala  
 180 185 190  
 Lys Ser Ala Val Phe Ala Thr Gly Arg Thr Ala Ala Ala Ala Thr  
 195 200 205  
 Ser Val Val Asn Ser Ser Tyr Phe Ser Ser Gly Ala Leu Trp Leu Ser  
 210 215 220  
 Gly Ala Leu Glu Arg Ala Ala Lys Ala Ala Ser Asp Leu Gly Thr Arg  
 225 230 235 240  
 Gly Ser Arg Gln

&lt;210&gt; 1847

&lt;211&gt; 237

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

<400> 1847  
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 gtggatgggt tcgccagagg gatcggaata tgccccgata gttaccagag ctgcactcgt 120  
 accgactgcg aggagcacia aaagaagctc ccgaccaacc ttagccgtaa cggcgggtgca 180  
 gcagcagtga aggctaagga gaacggccgc cgtcgccgcc agaaagacag ggagtag 237

&lt;210&gt; 1848

&lt;211&gt; 78

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1848

Met Leu Asp Thr Leu Ile Gly Gly Ile Val Gly Gly Ile Ala Gly Ala  
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 Ile Ile Gly Thr Val Asp Gly Phe Ala Arg Gly Ile Gly Ile Cys Pro  
 20 25 30  
 Asp Ser Tyr Gln Ser Cys Thr Arg Thr Asp Cys Glu Glu His Lys Lys  
 35 40 45  
 Lys Leu Pro Thr Asn Leu Ser Arg Asn Gly Gly Ala Ala Ala Val Lys  
 50 55 60  
 Ala Lys Glu Asn Gly Arg Arg Arg Arg Gln Lys Asp Arg Glu  
 65 70 75

&lt;210&gt; 1849

&lt;211&gt; 1269

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

<400> 1849  
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gccgcaaaa gtgccgtagc agagtatcta aaccaaggtc ttccaagaa gcttaccgca 300
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gctaaccga aagccaacgt tttgcttccg agtcccgggt tcccatggga cctagtcgagc 420
tccatctaca agaaccttga ggtccgccac tataatttcc ttccagaaaa gaactttgaa 480
atcgactttg atagcgctcg agcgctcgtg gacgagaaca catttgccat atttataatc 540
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<210> 1850

<211> 422

<212> PRT

<213> Arabidopsis thaliana

<400> 1850

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Ala Lys Asp Ala Ala Ala Ala Ser Leu Gly Ser Tyr Thr Ser Ala Leu  
20 25 30

Tyr Ala Leu Cys Asp Pro His Gly Lys Pro Ile Leu Pro Pro Arg Asn  
Page 2715

35

40

45

Glu Ile Leu Glu Thr Ser Asn Thr Ala Glu Lys Ala Val Val Lys Ala  
 50 55 60  
 Val Leu Tyr Gly Ser Gly Asn Ala Tyr Ala Pro Ser Leu Gly Leu Ala  
 65 70 75 80  
 Ala Ala Lys Ser Ala Val Ala Glu Tyr Leu Asn Gln Gly Leu Pro Lys  
 85 90 95  
 Lys Leu Thr Ala Asp Asp Val Phe Met Thr Leu Gly Cys Lys Gln Ala  
 100 105 110  
 Ile Glu Leu Ala Val Asp Ile Leu Ala Lys Pro Lys Ala Asn Val Leu  
 115 120 125  
 Leu Pro Ser Pro Gly Phe Pro Trp Asp Leu Val Arg Ser Ile Tyr Lys  
 130 135 140  
 Asn Leu Glu Val Arg His Tyr Asn Phe Leu Pro Glu Lys Asn Phe Glu  
 145 150 155 160  
 Ile Asp Phe Asp Ser Val Arg Ala Leu Val Asp Glu Asn Thr Phe Ala  
 165 170 175  
 Ile Phe Ile Ile Asn Pro His Asn Pro Asn Gly Asn Thr Tyr Ser Glu  
 180 185 190  
 Ala His Leu Lys Gln Leu Ala Glu Leu Ala Lys Glu Leu Lys Ile Met  
 195 200 205  
 Val Val Ser Asp Glu Val Phe Arg Trp Thr Leu Phe Gly Ser Asn Pro  
 210 215 220  
 Phe Val Pro Met Gly Lys Phe Ser Ser Ile Val Pro Val Val Thr Leu  
 225 230 235 240  
 Gly Ser Ile Ser Lys Gly Trp Lys Val Pro Gly Trp Arg Thr Gly Trp  
 245 250 255  
 Leu Thr Leu His Asp Leu Asp Gly Val Phe Arg Asn Thr Lys Val Leu  
 260 265 270  
 Gln Ala Ala Gln Asp Phe Leu Gln Ile Asn Asn Asn Pro Pro Thr Val  
 275 280 285

Ile Gln Ala Ala Ile Pro Asp Ile Leu Glu Lys Thr Pro Gln Glu Phe  
 290 295 300

Phe Asp Lys Arg Gln Ser Phe Leu Lys Asp Lys Val Glu Phe Gly Tyr  
 305 310 315 320

Ser Lys Leu Lys Tyr Ile Pro Ser Leu Thr Cys Tyr Met Lys Pro Glu  
 325 330 335

Ala Cys Thr Phe Leu Trp Thr Glu Leu Asp Leu Ser Ser Phe Val Asp  
 340 345 350

Ile Glu Asp Asp Gln Asp Phe Cys Asn Lys Leu Ala Lys Glu Glu Asn  
 355 360 365

Leu Val Val Leu Pro Gly Ile Ala Phe Ser Gln Lys Asn Trp Leu Arg  
 370 375 380

His Ser Ile Asp Met Glu Thr Pro Val Leu Glu Asp Ala Leu Glu Arg  
 385 390 395 400

Leu Lys Ser Phe Cys Asp Arg His Ser Asn Lys Lys Ala Pro Leu Lys  
 405 410 415

Asp Val Asn Gly Val Lys  
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<210> 1851

<211> 654

<212> DNA

<213> Arabidopsis thaliana

<400> 1851

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caagagaggt tcacgatttg gatgaaatct ttggtgttca atagcaaagg ctgcacagtt	180
tttgattcca aaggaaactt aatctatcga gtggataatt atgattccaa gagttggagt	240
aatgaagttt actttatgga tttaaaccgc aaaattttgt ttactttacg tcaaaagaaa	300
ctgggattct tcaaatcttg ggaaggatat aactcaaccg ggaccagatt tcgactaaga	360
aagattttca agattttgcc aagagaatca tcttcgtctt acaaagttgt aatgggatca	420
cgcatagttg atggtgatca acaatcttgt tataagattg taaatcgtgg atcagttttc	480

gcaatcaagg atggatcgga aagattaatg gcagaagtta aaaacaaact atcggatatt 540  
 agtgggtttgg atcttggaga tgatgttttg acaatgatgg tggagccaca actagatcat 600  
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<210> 1852

<211> 217

<212> PRT

<213> Arabidopsis thaliana

<400> 1852

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 20 25 30  
 Ile Leu Pro Tyr Leu Thr Thr Glu Gln Glu Arg Phe Thr Ile Trp Met  
 35 40 45  
 Lys Ser Leu Val Phe Asn Ser Lys Gly Cys Thr Val Phe Asp Ser Lys  
 50 55 60  
 Gly Asn Leu Ile Tyr Arg Val Asp Asn Tyr Asp Ser Lys Ser Trp Ser  
 65 70 75 80  
 Asn Glu Val Tyr Phe Met Asp Leu Asn Gly Lys Ile Leu Phe Thr Leu  
 85 90 95  
 Arg Gln Lys Lys Leu Gly Phe Phe Lys Ser Trp Glu Gly Tyr Asn Ser  
 100 105 110  
 Thr Gly Thr Arg Phe Arg Leu Arg Lys Ile Phe Lys Ile Leu Pro Arg  
 115 120 125  
 Glu Ser Ser Ser Ser Tyr Lys Val Val Met Gly Ser Arg Ile Val Asp  
 130 135 140  
 Gly Asp Gln Gln Ser Cys Tyr Lys Ile Val Asn Arg Gly Ser Val Phe  
 145 150 155 160  
 Ala Ile Lys Asp Gly Ser Gly Arg Leu Met Ala Glu Val Lys Asn Lys  
 165 170 175

Leu Ser Asp Ile Ser Gly Leu Asp Leu Gly Asp Asp Val Leu Thr Met  
 180 185 190

Met Val Glu Pro Gln Leu Asp His Ser Leu Ile Met Gly Ile Val Ile  
 195 200 205

Ala Tyr Lys Leu Thr Lys Cys Lys Leu  
 210 215

<210> 1853

<211> 1629

<212> DNA

<213> *Arabidopsis thaliana*

<400> 1853  
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 ggaaccacgt gtccaattcc accgagaagc aactacacat acattttgca agtgaagac 360  
 caaatggaa gtttctatta ctcccatct cttgccttcc acaaggcagc tgggtggattc 420  
 ggaggtatca gaatccttag ccgtcctgga attccagttc catttgctga ccctgcagga 480  
 gattacactg tcctcattgg agattgggtac aaatttaac acacgggattt gaagtctcgt 540  
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 ggtgctacct taaacgttga acaaggaaaa acataccgat tgaggatc acacgttggga 660  
 ttacaagatt ctctgaactt ccgaatccaa aaccacagaa tgaagcttgt ggaagtgcga 720  
 gggagcgaca cacttcaaac catgttttcc tctcttgacg ttcacgttgg ccagctttac 780  
 tccgttctaa ttactgctga ccaatctcct cgtgactact acgtgggtgt ttcgtctcga 840  
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 cattatggtc ttataccgct cattaggaca attgtgttcg gtatgtcagc cggacagata 1080  
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 aaactggctg acttcttcaa gattagcggt gtctataaga tcaacagcat ctcagacaaa 1200

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ccccatatg gaggtttata ccttgacacc tcagttttgc aagtcgacta tcgaaccttt 1260
atcgagattg tattcgagaa ccaagaagat atcgtccaaa gttatcatct caatggttac 1320
tccttttggg tggtcgggat ggatggtgga cagtgggaaga caggaagcag aaatggttat 1380
aatttacgcg atcgagtttc acgttcaca gtccaagtgt acccaaaatc atggacagcc 1440
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cagtacttgg gacaacaact ttacttacgt gtcttcacgt catctacgtc tttagagat 1560
gagtacccta tcccgaagaa ttgcggtttg tgcggccggg caagaggacg acatactagg 1620
cctttgtaa 1629

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&lt;210&gt; 1854

&lt;211&gt; 542

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1854

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1      5      10

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Ser Phe Phe Ala Ala Val Thr Ala Glu Ser Pro Tyr Arg Phe Phe Asp
20      25      30

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Trp Asn Val Thr Tyr Gly Asp Ile Tyr Pro Leu Gly Val Arg Gln Gln
35      40      45

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```

Gly Ile Leu Ile Asn Gly Gln Phe Pro Gly Pro Asp Ile His Ser Val
50      55      60

```

```

Thr Asn Asp Asn Leu Ile Ile Asn Val His Asn Ser Leu Asp Glu Pro
65      70      75      80

```

```

Phe Leu Ile Ser Trp Asn Gly Val Gln Asn Arg Arg Asn Ser Tyr Val
85      90      95

```

```

Asp Gly Met Tyr Gly Thr Thr Cys Pro Ile Pro Pro Arg Ser Asn Tyr
100      105

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```

Thr Tyr Ile Leu Gln Val Lys Asp Gln Ile Gly Ser Phe Tyr Tyr Phe
115      120      125

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Pro Ser Leu Ala Phe His Lys Ala Ala Gly Gly Phe Gly Gly Ile Arg
130      135      140

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 Asp Tyr Thr Val Leu Ile Gly Asp Trp Tyr Lys Phe Asn His Thr Asp  
 165 170 175  
 Leu Lys Ser Arg Leu Asp Arg Gly Arg Lys Leu Pro Ser Pro Asp Gly  
 180 185 190  
 Ile Leu Ile Asn Gly Arg Ser Asn Gly Ala Thr Leu Asn Val Glu Gln  
 195 200 205  
 Gly Lys Thr Tyr Arg Leu Arg Ile Ser Asn Val Gly Leu Gln Asp Ser  
 210 215 220  
 Leu Asn Phe Arg Ile Gln Asn His Arg Met Lys Leu Val Glu Val Glu  
 225 230 235 240  
 Gly Thr His Thr Leu Gln Thr Met Phe Ser Ser Leu Asp Val His Val  
 245 250 255  
 Gly Gln Ser Tyr Ser Val Leu Ile Thr Ala Asp Gln Ser Pro Arg Asp  
 260 265 270  
 Tyr Tyr Val Val Val Ser Ser Arg Phe Thr Asp Lys Ile Ile Thr Thr  
 275 280 285  
 Thr Gly Val Leu Arg Tyr Ser Gly Ser Ser Thr Pro Ala Ser Gly Pro  
 290 295 300  
 Ile Pro Gly Gly Pro Thr Ile Gln Val Asp Trp Ser Leu Asn Gln Ala  
 305 310 315 320  
 Arg Ala Ile Arg Thr Asn Leu Thr Ala Ser Gly Pro Arg Pro Asn Pro  
 325 330 335  
 Gln Gly Ser Tyr His Tyr Gly Leu Ile Pro Leu Ile Arg Thr Ile Val  
 340 345 350  
 Phe Gly Ser Ser Ala Gly Gln Ile Asn Gly Lys Gln Arg Tyr Gly Val  
 355 360 365  
 Asn Ser Val Ser Phe Val Pro Ala Asp Thr Pro Leu Lys Leu Ala Asp  
 370 375 380  
 Phe Phe Lys Ile Ser Gly Val Tyr Lys Ile Asn Ser Ile Ser Asp Lys  
 Page 2721

385 390 395 400

Pro Thr Tyr Gly<sub>405</sub> Leu Tyr Leu Asp Thr<sub>410</sub> Ser Val Leu Gln Val<sub>415</sub> Asp

Tyr Arg Thr Phe<sub>420</sub> Ile Glu Ile Val Phe<sub>425</sub> Glu Asn Gln Glu Asp<sub>430</sub> Ile Val

Gln Ser Tyr<sub>435</sub> His Leu Asn Gly Tyr<sub>440</sub> Ser Phe Trp Val<sub>445</sub> Val Gly Met Asp

Gly Gly<sub>450</sub> Gln Trp Lys Thr<sub>455</sub> Ser Arg Asn Gly Tyr<sub>460</sub> Asn Leu Arg Asp

Ala Val Ser Arg Ser Thr<sub>470</sub> Val Gln Val Tyr<sub>475</sub> Lys Ser Trp Thr Ala<sub>480</sub>

Ile Tyr Ile Ala<sub>485</sub> Leu Asp Asn Val Gly<sub>490</sub> Met Trp Asn Leu Arg Ser<sub>495</sub> Glu

Phe Trp Ala Arg<sub>500</sub> Gln Tyr Leu Gly<sub>505</sub> Gln Gln Leu Tyr Leu<sub>510</sub> Val Phe

Thr Ser Ser<sub>515</sub> Thr Ser Leu Arg Asp<sub>520</sub> Glu Tyr Pro Ile<sub>525</sub> Lys Asn Ser

Arg Leu<sub>530</sub> Cys Gly Arg Ala Arg<sub>535</sub> Gly Arg His Thr Arg<sub>540</sub> Pro Leu

<210> 1855

<211> 648

<212> DNA

<213> Arabidopsis thaliana

<400> 1855

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<210> 1856

<211> 215

<212> PRT

<213> Arabidopsis thaliana

<400> 1856

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			20					25					30		

Asp	Ala	Thr	Leu	Gly	Ser	Gly	Asn	Leu	Arg	Glu	Ala	Val	Arg	Leu	Pro
		35					40					45			

Pro	Gly	Glu	Asp	Ala	Asn	Glu	Trp	Leu	Ala	Val	Asn	Thr	Val	Asp	Phe
	50					55					60				

Phe	Asn	Gln	Val	Asn	Leu	Leu	Tyr	Gly	Thr	Leu	Thr	Glu	Phe	Cys	Thr
65				70						75				80	

Pro	Asp	Asn	Cys	Pro	Thr	Met	Thr	Ala	Gly	Pro	Lys	Tyr	Glu	Tyr	Arg
			85						90					95	

Trp	Ala	Asp	Gly	Val	Gln	Ile	Lys	Lys	Pro	Ile	Glu	Val	Ser	Ala	Pro
			100					105					110		

Lys	Tyr	Val	Glu	Tyr	Leu	Met	Asp	Trp	Ile	Glu	Thr	Gln	Leu	Asp	Asp
		115					120					125			

Glu	Thr	Leu	Phe	Pro	Gln	Arg	Leu	Gly	Ala	Pro	Phe	Pro	Gln	Asn	Phe
	130					135					140				

Lys	Asp	Val	Val	Lys	Thr	Ile	Phe	Lys	Arg	Leu	Phe	Arg	Val	Tyr	Ala
145					150					155					160

His	Ile	Tyr	His	Ser	His	Phe	Gln	Lys	Ile	Val	Ser	Leu	Lys	Glu	Glu
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Ala His Leu Asn Thr Cys Phe Lys His Phe Ile Leu Phe Thr His Glu  
180 185 190

Phe Gly Leu Ile Asp Lys Lys Glu Leu Ala Pro Leu Gln Glu Leu Ile  
195 200 205

Glu Ser Ile Ile Ser Pro Tyr  
210 215

<210> 1857

<211> 2766

<212> DNA

<213> Arabidopsis thaliana

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cctcgagttt atattcttca ttttggtccg gaccattgc tcagaatttt tgatatagcg 720  
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tttgtggagt	ttgtggatga	gaaagaagaa	gctattaaga	gaatgttcag	aagaagcgat	2700
gactctaata	acaacccatc	tcatgtaggg	gaagtccaag	ctgatactga	ggtaccacga	2760
aattga						2766

&lt;210&gt; 1858

&lt;211&gt; 921

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1858

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Met Gly Leu Gly Ile Asp Pro Ser Val Ala Ile Thr Ala Leu Ile Val
1      5      10      15

Val Ile Leu Val Val Pro Met Asp Cys Gln Arg Pro Gln Leu Val Asn
20      25      30

Ile Gly Ala Val Phe Ala Phe Asp Ser Val Ile Gly Arg Ala Ala Lys
35      40      45

Val Ala Leu Glu Ala Ala Val Ser Asp Val Asn Asn Asp Lys Ser Phe
50      55      60

Leu Lys Glu Thr Glu Leu Arg Leu Leu Met Glu Asp Ser Ala Cys Asn
65      70      75      80

Val Phe Arg Gly Ser Phe Gly Ala Phe Glu Leu Leu Glu Lys Glu Val
85      90      95

Val Ala Met Ile Gly Pro Ile Ser Ser Ser Val Ala His Thr Ile Ser
100     105     110

Asp Ile Ala Lys Gly Leu His Phe Pro Leu Val Ser Phe Ala Ala Thr
115     120     125

Asp Pro Thr Leu Ser Ala Leu Gln Phe Pro Phe Phe Leu Arg Thr Thr
130     135     140

Pro Asn Asp Ala His Gln Met Ser Ala Leu Val Asp Leu Ile Asn Phe
145     150     155     160

Tyr Gly Trp Lys Glu Val Ile Ser Val Tyr Ser Asp Asp Glu Leu Gly
165     170     175

Arg Asn Gly Val Ser Ala Leu Asp Asp Glu Leu Tyr Lys Lys Arg Ser
180     185     190

Arg Ile Ser Tyr Lys Val Pro Leu Ser Val His Ser Asp Glu Lys Phe
195     200     205

Leu Thr Asn Ala Leu Asn Lys Ser Lys Ser Ile Gly Pro Arg Val Tyr
210     215     220

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## 047-E2F-PCT.ST25.txt

Ile Leu His Phe Gly Pro Asp Pro Leu Leu Arg Ile Phe Asp Ile Ala  
 225 230 235 240  
 Gln Lys Leu Gln Met Met Thr His Glu Tyr Val Trp Leu Ala Thr Asp  
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 Trp Leu Ser Val Thr Leu Asp Ser Leu Ser Asp Lys Gly Thr Leu Lys  
 260 265 270  
 Arg Leu Glu Gly Val Val Gly Leu Arg Gln His Ile Pro Glu Ser Val  
 275 280 285  
 Lys Met Glu His Phe Thr His Lys Leu Gln Ser Asn Arg Ser Met Asn  
 290 295 300  
 Ala Tyr Ala Leu His Ala Tyr Asp Thr Val Trp Met Ile Ala His Gly  
 305 310 315 320  
 Ile Glu Glu Leu Leu Asn Glu Gly Ile Asn Ile Thr Phe Ser Tyr Ser  
 325 330 335  
 Glu Lys Leu Leu His Ala Arg Gly Thr Lys Leu His Leu Glu Lys Ile  
 340 345 350  
 Lys Phe Phe Asn Ser Gly Glu Leu Leu Leu Glu Lys Leu Leu Lys Val  
 355 360 365  
 Asn Phe Thr Gly Ile Ala Gly Gln Val Gln Phe Gly Ser Gly Arg Asn  
 370 375 380  
 Val Ile Gly Cys Asp Tyr Glu Ile Ile Asn Val Asn Lys Thr Asp Val  
 385 390 395 400  
 His Thr Val Gly Phe Trp Ser Lys Asn Gly Gly Phe Ser Val Val Ala  
 405 410 415  
 Pro Lys Thr Arg His Ser Gln Lys Lys Thr Ser Phe Val Ser Asp Glu  
 420 425 430  
 Lys Leu Gly Asp Ile Thr Trp Pro Gly Gly Gly Arg Glu Lys Pro Arg  
 435 440 445  
 Gly Trp Val Ile Ala Asp Ser Ala Asp Pro Leu Lys Ile Val Val Pro  
 450 455 460  
 Arg Arg Val Ser Phe Val Glu Phe Val Thr Glu Glu Lys Asn Ser Ser  
 465 470 475 480

047-E2F-PCT.ST25.txt

His Arg Ile Gln Gly Phe Cys Ile Asp Val Phe Ile Glu Ala Leu Lys  
485 490 495

Phe Val Pro Tyr Ser Val Pro Tyr Ile Phe Glu Pro Phe Gly Asn Gly  
500 505 510

His Ser Ser Pro Asn Tyr Asn His Leu Ile Gln Met Val Thr Asp Gly  
515 520 525

Val Tyr Asp Ala Ala Val Gly Asp Ile Ala Ile Val Pro Ser Arg Ser  
530 535 540

Lys Leu Val Asp Phe Ser Gln Pro Tyr Ala Ser Thr Gly Leu Val Val  
545 550 555 560

Val Ile Pro Ala Asn Asp Asp Asn Ala Thr Trp Ile Phe Leu Arg Pro  
565 570 575

Phe Thr Ser Arg Leu Trp Cys Val Val Leu Val Ser Phe Leu Val Ile  
580 585 590

Ala Val Val Ile Trp Ile Leu Glu His Arg Ile Asn Glu Asp Phe Arg  
595 600 605

Gly Pro Pro Arg Arg Gln Leu Ser Thr Met Leu Leu Phe Ser Phe Ser  
610 615 620

Thr Leu Phe Lys Arg Asn Gln Glu Asp Thr Ile Ser Asn Leu Ala Arg  
625 630 635 640

Leu Val Met Ile Val Trp Leu Phe Leu Leu Met Val Leu Thr Ala Ser  
645 650 655

Tyr Thr Ala Asn Leu Thr Ser Ile Leu Thr Val Gln Gln Leu Pro Ser  
660 665 670

Ala Ile Thr Gly Ile Asp Ser Leu Arg Ala Ser Glu Val Pro Ile Gly  
675 680 685

Tyr Gln Ala Gly Thr Phe Thr Leu Glu Tyr Leu Thr Tyr Ser Leu Gly  
690 695 700

Met Ala Arg Ser Arg Leu Val Pro Leu Asp Ser Thr Glu Glu Tyr Glu  
705 710 715 720

Lys Ala Leu Lys Leu Gly Pro Thr Asn Trp Gly Gly Val Ala Ala Ile  
725 730 735

Val Asp Glu Leu Pro Tyr Ile Glu Leu Phe Leu Ala Glu Arg Thr Gly  
 740 745 750

Phe Lys Ile Val Gly Glu Pro Phe Met His Arg Gly Trp Gly Phe Ala  
 755 760 765

Phe Lys Arg Asp Ser Pro Leu Ala Ile Asp Met Ser Thr Ala Ile Leu  
 770 775 780

Lys Leu Ser Glu Thr Arg Lys Leu Gln Glu Ile Arg Lys Lys Trp Leu  
 785 790 795 800

Cys Lys Thr Asn Cys Ala Gly Lys Ser Asn Trp Asn Pro Glu Pro Asn  
 805 810 815

Gln Leu His Leu Lys Ser Phe Lys Gly Leu Tyr Leu Val Cys Ile Ala  
 820 825 830

Ile Thr Val Ser Ala Phe Leu Val Phe Val Leu Arg Met Ile Arg Gln  
 835 840 845

Phe Val Arg Tyr Arg Arg Met Glu Arg Thr Ser Ser Met Pro Arg Ala  
 850 855 860

Ser Trp Ser Ala Ser Pro Thr Leu Arg Leu Arg Glu Leu Val Phe Asp  
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Phe Val Glu Phe Val Asp Glu Lys Glu Glu Ala Ile Lys Arg Met Phe  
 885 890 895

Arg Arg Ser Asp Asp Ser Asn Asn Asn Pro Ser His Val Gly Glu Val  
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Gln Ala Asp Thr Glu Val Pro Arg Asn  
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<210> 1859

<211> 2115

<212> DNA

<213> Arabidopsis thaliana

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acaagcagca	ccattaaatt	tctacacaaa	agatcttctc	tccgggaaaa	tatagcagag	1920
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## 047-E2F-PCT.ST25.txt

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<210> 1860

<211> 704

<212> PRT

<213> Arabidopsis thaliana

<400> 1860

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 20 25 30

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 35 40 45

Ser Glu Lys Leu Glu Thr Val Ala Leu Asn Ser Pro Lys Lys Asp Ala  
 50 55 60

Arg Val Ser Leu Tyr Gly Glu Lys Ser Val Val Asp Glu Ile Phe Leu  
 65 70 75 80

Glu Asp Glu Glu Met Gly His Glu Thr Gly Leu Lys Asn Gly Glu Ser  
 85 90 95

Ser Pro Phe Cys Gly Val Ser Asp Lys Leu Leu Gln Arg Ile Glu Leu  
 100 105 110

Leu Gly Arg Asp His Glu Ala Thr Arg Leu Asp Asn Asn Lys Phe Arg  
 115 120 125

Ser Ile Glu Ser Met Lys Lys Arg Gln Glu Glu Ser Ala Cys Asp Asp  
 130 135 140

Leu Val Asp Met Lys Thr Lys Ile Gln Thr Leu Ala Ala Glu Asn Thr  
 145 150 155 160

Gln Leu Lys Lys Ser Leu Val Ala Lys Glu Glu Leu Ala Val Ser Leu  
 165 170 175

047-E2F-PCT.ST25.txt

Gln Glu Arg Lys Phe Gln Val Glu Ser Glu Phe Glu Ala Leu Met Thr  
180 185 190

Arg Leu Asp Ser Thr Glu Lys Glu Asn Ala Phe Leu Arg Tyr Glu Tyr  
195 200 205

Thr Val Leu Glu Lys Asp Leu Gln Val Lys Thr Glu Glu Thr Glu His  
210 215 220

Thr Arg Arg Ser Met Glu Leu Thr His Lys Gln Gln Leu Arg Asn Val  
225 230 235 240

Asn Lys Ile Val Glu Leu Glu Ala Glu Cys Gln Arg Leu Arg Leu  
245 250 255

Phe Arg Lys Lys Phe Pro Glu Lys Ser Ile Ser Met Arg Asn Glu Gly  
260 265 270

Glu Glu Lys Lys Met Glu Met Arg Arg Arg Asn Ala Asn Lys Ser Asp  
275 280 285

Met Met Met Arg Asp Glu Val Gln Ser Arg Lys Leu Lys Tyr Asp Leu  
290 295 300

Leu Met Glu Gln Ile Gly Asn Val Arg Ala Glu Asn Lys Asn Leu Met  
305 310 315 320

Asp Ile Ile Met Lys Lys Asn Ile Glu Ile Lys Asp Leu Ser Arg Gly  
325 330 335

Gln Lys Pro Leu Glu Ala Ser Ser Phe Asp Ile Gln Ser Glu Ser Ser  
340 345 350

Val Met Ser Pro Cys Gly Ser Lys Glu Met Lys Leu Leu Met Asp Asp  
355 360 365

Phe Asn Glu Met Glu Lys Leu Ala Ile Val Cys Thr Glu Lys Asp Pro  
370 375 380

Arg Val Asp Asp Glu Lys Glu Gly Ser Phe Asp Trp Ile Gln Val Val  
385 390 395 400

Leu Ser Ala Ile Thr Lys Gln Glu Arg Ile Ser Lys Arg Gly Val Lys  
405 410 415

Glu Leu Leu Gln Asp Ile Lys Ile Ala Leu Gly Cys Met Asp Glu Asn  
420 425 430

047-E2F-PCT.ST25.txt

Asp Asn Val Glu Arg Lys Lys Gly Glu Glu Asp Pro Leu Cys Ile Thr  
 435 440 445  
 Trp Lys Ser Asn Asn Glu Ser Gly Pro Met Thr Lys Asp Glu Ile Lys  
 450 455 460  
 Arg His Leu Gly Leu Thr Lys Ser Asp Lys Val Glu Lys Ile Glu Ser  
 465 470 475 480  
 Asp Glu Lys Gln Glu Leu Arg Lys Lys Leu Glu Glu Ser Val Glu Lys  
 485 490 495  
 Ile Arg Asn Leu Glu Ala Glu Met Lys Thr Leu Arg Glu Asn Lys Glu  
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 Lys Val Glu Ala Glu Met Glu Thr Glu Lys Ser Met Lys Glu Asp Leu  
 515 520 525  
 Asp Thr Lys Leu Asn Ile Thr Arg Ala Asn Leu Asn Glu Thr Gln Lys  
 530 535 540  
 Lys Leu Ser Ser Leu Glu Val Glu Phe Asp Tyr Arg Lys Ser Cys Cys  
 545 550 555 560  
 Glu Glu Leu Glu Gly Thr Cys Ile Glu Leu Gln Leu Gln Leu Glu Ser  
 565 570 575  
 Val Glu Thr Lys Lys Pro Thr Gln Arg Asn Lys Asn Gly Trp Asp Ile  
 580 585 590  
 Ala Thr Ala Ser Val Lys Leu Ser Glu Cys Gln Glu Thr Ile Thr Ser  
 595 600 605  
 Leu Arg Lys Gln Leu Arg Ala Leu Ser Thr Thr Glu Thr Ser Ser Thr  
 610 615 620  
 Ile Lys Phe Leu His Lys Arg Ser Ser Leu Arg Glu Asn Ile Ala Glu  
 625 630 635 640  
 Asp Asp Thr Asn Arg Val Ala Gln Asp Asp Asp Gly Asn Arg Tyr Asn  
 645 650 655  
 Ala Leu Ile Val Tyr Glu Pro Val Lys Ala Arg Gly Glu Lys Met Glu  
 660 665 670  
 Met Val Pro Arg Lys Lys Gln Gly Leu Gly Phe Leu Lys Lys Leu Leu

675

047-E2F-PCT.ST25.txt  
680 685

Phe Arg Arg Lys Arg Val Ser Ser Lys Lys Cys Leu Ala Leu Thr Met  
690 695 700

&lt;210&gt; 1861

&lt;211&gt; 1848

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1861

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gcgaaggaaa cgagtcattc tagtcacaat acggtgcaga agttaggagg tgtttccagt     1260
tctcttaatg gcaatatccc accatccggt gctacaatgg taacagggca tcacgtcttg     1320
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 accgagatac aaaactcgag gcatcgggtt aatggctctc ctggatttat agtcaaccca 1740  
 ttagctgaaa ttcgaccaga taatgatctg cagggtctgcc tcacaattga gggacgacga 1800  
 gaaacaaaac cttcaaaaagc ttctgagact ttaaaaacca ctgtgtga 1848

<210> 1862

<211> 615

<212> PRT

<213> Arabidopsis thaliana

<400> 1862

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20 25 30

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35 40 45

Phe Ile Ser Val Ile Leu Ser Val Asp Thr Gly Asp Lys Pro Ala Val  
50 55 60

Arg Lys His Cys Ile His Leu Leu Ala Val Leu Ser Val Ser Leu Pro  
65 70 75 80

Leu Asn Ser Leu Ser Pro Phe Leu Ser Lys Ile Leu Thr Arg Ile Thr  
85 90 95

Arg Arg Leu Arg Asp Pro Asp Ser Ser Ile Arg Ser Thr Cys Val Ala  
100 105 110

Ala Val Ser Ala Ile Ser Ser Arg Thr Thr Lys Pro Pro Phe Tyr Ser  
115 120 125

Ala Phe Met Lys Pro Leu Ala Asp Thr Leu Phe Thr Glu Gln Glu Val  
Page 2735

130

135

Asn Ala Gln Ile Gly Ala Ala Leu Cys Leu Ala Ala Ala Ile Asp Ser  
145 150 155 160

Ala Ser Asp Pro Asp Pro Val Arg Leu Gly Gln Thr Leu Leu Pro Arg  
165 170 175

Leu Glu Lys Leu Val Lys Cys Asn Ala Phe Lys Ala Lys Ser Ala Gly  
180 185 190

Val Val Val Ile Gly Ser Val Ile Gly Ala Gly Gly Leu Ser Gly Thr  
195 200 205

Ser Val Ser Ser Gly Gly Leu Lys Gly Leu Val Asp Cys Leu Leu Ser  
210 215 220

Phe Leu Val Ser Glu Asp Trp Ala Ala Arg Lys Ala Ala Ala Glu Ala  
225 230 235 240

Leu Gly Arg Leu Ala Thr Met Glu Arg Asn Glu Leu Gly Glu Phe Lys  
245 250 255

Ala Lys Cys Leu Lys Ile Phe Glu Ser Arg Lys Tyr Asp Lys Val Lys  
260 265 270

Ala Val Arg Glu Val Met Asn Gln Met Met Glu Ala Trp Lys Gln Val  
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Pro Asp Leu Ser Glu Glu Val Ser Pro Pro Arg Ser Asn Ala Ser Ser  
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Lys Gly Asp Ala Ser Asp Gly Arg Tyr Pro Ser Gly Ser Arg Val Gly  
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Ser Thr Pro Ala Lys Ser Arg Thr His Leu Val Asn Arg Ser Thr Pro  
325 330 335

Pro Gly Ser Ser Leu Ala Thr Thr Ala Arg Lys Gln Ala Asn Arg Lys  
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Asn Val Arg Arg Arg Leu Glu Trp Lys Ala Gly Gly Ala Ser Ile Pro  
370 375 380

047-E2F-PCT.ST25.txt

Thr Gly Val Ser Leu Glu Asp Glu Gln His Cys Asp His Asp Glu Asn  
385 390 395 400

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405 410 415

Gly Val Ser Ser Ser Leu Asn Gly Asn Ile Pro Pro Ser Gly Ala Thr  
420 425 430

Met Val Thr Gly His His Val Leu Ser Glu Asn Pro Asn Ser Asn Asn  
435 440 445

Cys Lys Gly Leu Glu Asp Ile Ser Leu Ile Arg Asn Gln Leu Val Gln  
450 455 460

Ile Glu Gln Gln Gln Ala Asn Leu Met Asp Leu Leu Gln Arg Phe Val  
465 470 475 480

Gly Ser Ser Gln His Gly Met Arg Gly Leu Glu Thr Arg Val His Gly  
485 490 495

Leu Glu Leu Ala Leu Asp Glu Ile Ser Tyr Asp Leu Ala Val Ser Asn  
500 505 510

Gly Arg Met Ser Asn Gly Ser Ser Arg Asn Asn Cys Cys Leu Leu Pro  
515 520 525

Ser Gly Ser Phe Ile Lys Ser Lys Phe Trp Lys Lys His Asp Ser Lys  
530 535 540

Tyr Ser Ala Ser Arg Met Ser Thr Tyr Arg Asn Arg Asn Ala Glu Thr  
545 550 555 560

Thr Glu Ile Gln Asn Ser Arg His Arg Phe Asn Gly Ser Pro Gly Phe  
565 570 575

Ile Val Asn Pro Leu Ala Glu Ile Arg Pro Asp Asn Asp Leu Gln Val  
580 585 590

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Glu Thr Leu Lys Thr Thr Val  
610 615

<210> 1863

<211> 981

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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accagaacaa tccgtgttcc aaatccacac aaagctgggg aattgccaac aggtggatct    360
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&lt;210&gt; 1864

&lt;211&gt; 326

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1864

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Leu Leu Arg Asn Phe Ser Pro Arg Pro Lys Phe Val Ala Met Ala Ala
          20          25          30

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           50                  55                  60  
 Ala Ser His Tyr Gln Thr Asp Ala Gly Ser Phe Phe Val Lys Thr Asn  
           65                  70                  75                  80  
 Arg Ser Ile Gly Pro Ala Met Phe Glu Gly Glu Ala Leu Gly Leu Glu  
                   85                  90                  95  
 Ala Met Tyr Glu Thr Arg Thr Ile Arg Val Pro Asn Pro His Lys Ala  
                   100                  105                  110  
 Gly Glu Leu Pro Thr Gly Gly Ser Tyr Ile Ile Met Glu Phe Ile Asp  
           115                  120                  125  
 Phe Gly Gly Ser Arg Gly Asn Gln Ala Glu Leu Gly Arg Lys Leu Ala  
           130                  135                  140  
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           145                  150                  155                  160  
 Asp Asn Thr Ile Gly Ser Thr Pro Gln Ile Asn Thr Trp Ser Ser Asp  
                   165                  170                  175  
 Trp Ile Glu Phe Tyr Gly Glu Lys Arg Leu Gly Tyr Gln Leu Lys Leu  
           180                  185                  190  
 Ala Arg Asp Gln Tyr Gly Asp Ser Ala Ile Tyr Gln Lys Gly His Thr  
           195                  200                  205  
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           210                  215                  220  
 Cys Leu Leu His Gly Asp Leu Trp Ser Gly Asn Ile Ala Tyr Asp Lys  
           225                  230                  235                  240  
 Asn Asn Glu Pro Val Ile Leu Asp Pro Ala Cys Tyr Tyr Gly His Asn  
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 Glu Ala Asp Phe Gly Met Ser Trp Cys Ala Gly Phe Gly Glu Ser Phe  
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 Tyr Asn Ala Tyr Phe Lys Val Met Pro Lys Gln Ala Gly Tyr Glu Lys  
           275                  280                  285

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Arg Arg Asp Leu Tyr Leu Leu Tyr His Tyr Leu Asn His Tyr Asn Leu  
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Leu Arg Met Leu Lys Ala  
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<210> 1865

<211> 1182

<212> DNA

<213> Arabidopsis thaliana

<400> 1865  
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Page 2740

&lt;210&gt; 1866

&lt;211&gt; 393

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1866

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195 200 047-E2F-PCT.ST25.txt 205

Ser Gly Leu Glu Arg Arg Phe Cys Gln Gln Cys Ser Arg Phe His Ala  
 210 215

Val Ser Glu Phe Asp Glu Lys Lys Arg Ser Cys Arg Lys Arg Leu Ser  
 225 230 235 240

His His Asn Ala Arg Arg Arg Lys Pro Gln Gly Val Phe Ser Met Asn  
 245 250 255

Pro Glu Arg Val Tyr Asp Arg Arg Gln His Thr Asn Met Leu Trp Asn  
 260 265 270

Gly Val Ser Leu Asn Ala Arg Ser Glu Glu Met Tyr Glu Trp Gly Asn  
 275 280 285

Asn Thr Tyr Asp Thr Lys Pro Arg Gln Thr Glu Lys Ser Phe Thr Leu  
 290 295 300

Ser Phe Gln Arg Gly Asn Gly Ser Glu Asp Gln Leu Val Ala Ser Ser  
 305 310 315 320

Ser Arg Met Phe Ser Thr Ser Gln Thr Ser Gly Gly Phe Pro Ala Gly  
 325 330 335

Lys Ser Lys Phe Gln Leu His Gly Glu Asp Val Gly Glu Tyr Ser Gly  
 340 345 350

Val Leu His Glu Ser Gln Asp Ile His Arg Ala Leu Ser Leu Leu Ser  
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Leu Cys Ser Tyr Asp Val Val Pro Lys  
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<210> 1867

<211> 3252

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 1868

&lt;211&gt; 1083

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1868

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 Gly Asp Met Asn Gly Lys Asp His Gln Glu Lys val Phe Ser Pro Ile  
 50 55 60  
 Lys Tyr Phe val Glu Glu val val Asn Ser Phe Asp Glu Ser Asp Leu  
 65 70 75 80  
 Tyr Lys Thr Trp Ile Lys val Ile Ala Thr Arg Asn Thr Arg Glu Arg  
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 Ser Asn Arg Leu Glu Asn Ile Cys Trp Arg Ile Trp His Leu Ala Arg  
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 Lys Lys Lys Gln Ile val Trp Asp Asp Gly val Arg Leu Ser Lys Arg  
 115 120 125  
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 Arg Asn Leu Tyr Ile val Leu Ile Arg Gln val Glu Ile Gly Phe Ser  
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 210 215 220  
 Tyr Leu val Pro Cys Phe Thr Asn Cys Ser Met His Gly Leu val Arg  
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 Gly Glu Asn Met Glu Leu Gly Arg Asp Ser Asp Thr Gly Gly Gln val  
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 305 310 315 320  
 Asp Lys Tyr Ile Pro Lys Glu Ser Leu Trp Pro His Ile Pro Glu Phe  
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 Val Asp Gly Ala Leu Asn His Ile Val Ser Ile Ala Arg Ser Leu Gly  
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 Glu Gln Val Asn Gly Gly Lys Pro Ile Trp Pro Tyr Val Ile His Gly  
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 His Tyr Ala Asp Ala Gly Glu Val Ala Ala His Leu Ala Gly Ala Leu  
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 Asp Ser Gln Glu Pro Asp Gly Asp Leu Lys Ser Leu Ile Gly Pro Asp  
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 Arg Asn Gln Ile Lys Lys Pro Val Pro Pro Ile Trp Ser Glu Ile Met  
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Arg Phe Phe Ser Asn Pro His Lys Pro Thr Ile Leu Ala Leu Ser Arg  
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 580 585 590  
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 Tyr Pro Lys His His Lys Gln Ser Glu Val Pro Asp Ile Tyr Arg Leu  
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 Gly Leu Lys Asn Ile His Arg Phe Ser Trp Pro Glu His Cys Arg Asn  
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 Tyr Leu Ser His Val Glu His Cys Arg Asn Arg His Pro Thr Ser Ser  
 725 730 735  
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 Asp Val Asp Asp Ile Ser Leu Arg Phe Ser Thr Glu Gly Asp Phe Thr  
 755 760 765  
 Leu Asn Gly Glu Leu Asp Ala Gly Thr Arg Gln Lys Lys Leu Val Asp  
 Page 2747

770

775

780

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Ser Pro Gly Arg Arg Gln Met Leu Phe Val Val Ala Val Asp Ser Tyr  
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Asp Asp Asn Gly Asn Ile Lys Ala Asn Leu Asn Glu Ile Ile Lys Asn  
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Met Ile Lys Ala Ala Asp Leu Thr Ser Gly Lys Gly Lys Ile Gly Phe  
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Val Leu Ala Ser Gly Ser Ser Leu Gln Glu Val Val Asp Ile Thr Gln  
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Lys Asn Leu Ile Asn Leu Glu Asp Phe Asp Ala Ile Val Cys Asn Ser  
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Gly Ser Glu Ile Tyr Tyr Pro Trp Arg Asp Met Met Val Asp Ala Asp  
 885 890 895

Tyr Glu Thr His Val Glu Tyr Lys Trp Pro Gly Glu Ser Ile Arg Ser  
 900 905 910

Val Ile Leu Arg Leu Ile Cys Thr Glu Pro Ala Ala Glu Asp Asp Ile  
 915 920 925

Thr Glu Tyr Ala Ser Ser Cys Ser Thr Arg Cys Tyr Ala Ile Ser Val  
 930 935 940

Lys Gln Gly Val Lys Thr Arg Arg Val Asp Asp Leu Arg Gln Arg Leu  
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Arg Met Arg Gly Leu Arg Cys Asn Ile Val Tyr Thr His Ala Ala Thr  
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Arg Leu Asn Val Ile Pro Leu Cys Ala Ser Arg Ile Gln Ala Leu Arg  
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Tyr Leu Ser Ile Arg Trp Gly Ile Asp Met Ser Lys Thr Val Phe Phe  
 995 1000 1005

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Leu His Lys Thr Ile Ile Leu Lys Gly Val Val Gly Ser Asp Ser  
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Glu Lys Leu Leu Arg Ser Glu Glu Asn Phe Lys Arg Glu Asp Ala  
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<211> 1365

<212> DNA

<213> Arabidopsis thaliana

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<210> 1870

<211> 454

<212> PRT

<213> Arabidopsis thaliana

<400> 1870

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 35 40 45

Met Lys Pro Leu Asn Ala Glu Ser His Ser Arg Ser Glu Ser Trp Val  
 50 55 60

Thr Arg Ala Ser Thr Leu Ile Ala Pro Glu Val Glu Glu Lys Gly Gly  
 65 70 75 80

Glu Val Glu Asp Phe Glu Gln Leu Ala Lys Lys Leu Glu Asp Ala Ser  
 85 90 95

Pro Leu Glu Ile Met Asp Lys Ala Leu Glu Arg Phe Gly Asp Gln Ile  
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Ala Ile Ala Phe Ser Gly Ala Glu Asp Val Ala Leu Ile Glu Tyr Ala  
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Arg Leu Thr Gly Lys Pro Phe Arg Val Phe Ser Leu Asp Thr Gly Arg  
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Leu Asn Pro Glu Thr Tyr Arg Leu Phe Asp Ala Val Glu Lys Gln Tyr  
 145 150 155 160

Gly Ile Arg Ile Glu Tyr Met Phe Pro Asp Ala Val Glu Val Gln Ala  
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Leu Val Arg Asn Lys Gly Leu Phe Ser Phe Tyr Glu Asp Gly His Gln  
 180 185 190

Glu Cys Cys Arg Val Arg Lys Val Arg Pro Leu Arg Arg Ala Leu Lys  
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Gly Leu Lys Ala Trp Ile Thr Gly Gln Arg Lys Asp Gln Ser Pro Gly  
 210 215 220

Thr Arg Ser Glu Ile Pro Ile Val Gln Val Asp Pro Val Phe Glu Gly  
 225 230 235 240

Leu Asp Gly Gly Val Gly Ser Leu Val Lys Trp Asn Pro Leu Ala Asn  
 245 250 255

Val Glu Gly Ala Asp Val Trp Asn Phe Leu Arg Thr Met Asp Val Pro  
 260 265 270

Val Asn Ala Leu His Ala Gln Gly Tyr Val Ser Ile Gly Cys Glu Pro  
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Leu Tyr Ala Pro Trp Cys Pro Phe Cys Gln Ala Met Glu Ala Ser Tyr  
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Phe Arg Ala Asp Gly Glu Gln Lys Glu Phe Ala Lys Gln Glu Leu Gln  
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<211> 408

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<210> 1872

<211> 135

<212> PRT

<213> Arabidopsis thaliana

<400> 1872

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20 25 30

Asn Arg Asp Arg Pro Tyr Gly His Cys Leu Val Ala Gly Leu Lys Lys  
35 40 45

047-E2F-PCT.ST25.txt

Tyr Pro Ser Lys Val Ile Arg Lys Asp Ser Ala Lys Lys Thr Ala Lys  
50 55 60

Lys Ser Arg Val Lys Cys Phe Ile Lys Leu Val Asn Tyr Gln His Leu  
65 70 75 80

Met Pro Thr Arg Tyr Thr Leu Asp Val Asp Leu Lys Glu Val Ala Thr  
85 90 95

Leu Asp Ala Leu Gln Ser Lys Asp Lys Lys Val Ala Ala Leu Lys Glu  
100 105 110

Ala Lys Ala Lys Leu Glu Glu Arg Phe Lys Thr Gly Lys Asn Arg Trp  
115 120 125

Phe Phe Thr Lys Leu Arg Phe  
130 135

<210> 1873

<211> 1827

<212> DNA

<213> Arabidopsis thaliana

<400> 1873

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ggacctcaga cttatccgat gcatatccct gtgctagtgc cattggggag ctcaataaca	720
agttctctat cacatctccc ttcagagcca gatagtcac cccacacagt tgcaggagat	780
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&lt;210&gt; 1874

&lt;211&gt; 608

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1874

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1 5 10 15

Pro Tyr Thr Ile Thr Lys Gln Arg Glu Arg Trp Thr Glu Glu Glu His  
20 25 30

Asn Arg Phe Ile Glu Ala Leu Arg Leu Tyr Gly Arg Ala Trp Gln Lys  
35 40 45

Ile Glu Glu His Val Ala Thr Lys Thr Ala Val Gln Ile Arg Ser His  
50 55 60



047-E2F-PCT.ST25.txt

Ala Gln Lys Phe Phe Ser Lys Val Glu Lys Glu Ala Glu Ala Lys Gly  
65 70 75 80

Val Ala Met Gly Gln Ala Leu Asp Ile Ala Ile Pro Pro Pro Arg Pro  
85 90 95

Lys Arg Lys Pro Asn Asn Pro Tyr Pro Arg Lys Thr Gly Ser Gly Thr  
100 105 110

Ile Leu Met Ser Lys Thr Gly Val Asn Asp Gly Lys Glu Ser Leu Gly  
115 120 125

Ser Glu Lys Val Ser His Pro Glu Met Ala Asn Glu Asp Arg Gln Gln  
130 135 140

Ser Lys Pro Glu Glu Lys Thr Leu Gln Glu Asp Asn Cys Ser Asp Cys  
145 150 155 160

Phe Thr His Gln Tyr Leu Ser Ala Ala Ser Ser Met Asn Lys Ser Cys  
165 170 175

Ile Glu Thr Ser Asn Ala Ser Thr Phe Arg Glu Phe Leu Pro Ser Arg  
180 185 190

Glu Glu Gly Ser Gln Asn Asn Arg Val Arg Lys Glu Ser Asn Ser Asp  
195 200 205

Leu Asn Ala Lys Ser Leu Glu Asn Gly Asn Glu Gln Gly Pro Gln Thr  
210 215 220

Tyr Pro Met His Ile Pro Val Leu Val Pro Leu Gly Ser Ser Ile Thr  
225 230 235 240

Ser Ser Leu Ser His Pro Pro Ser Glu Pro Asp Ser His Pro His Thr  
245 250 255

Val Ala Gly Asp Tyr Gln Ser Phe Pro Asn His Ile Met Ser Thr Leu  
260 265 270

Leu Gln Thr Pro Ala Leu Tyr Thr Ala Ala Thr Phe Ala Ser Ser Phe  
275 280 285

Trp Pro Pro Asp Ser Ser Gly Gly Ser Pro Val Pro Gly Asn Ser Pro  
290 295 300

Pro Asn Leu Ala Ala Met Ala Ala Ala Thr Val Ala Ala Ala Ser Ala  
305 310 315 320

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Trp Trp Ala Ala Asn Gly Leu Leu Pro Leu Cys Ala Pro Leu Ser Ser  
 325 330 335  
 Gly Gly Phe Thr Ser His Pro Pro Ser Thr Phe Gly Pro Ser Cys Asp  
 340 345 350  
 Val Glu Tyr Thr Lys Ala Ser Thr Leu Gln His Gly Ser Val Gln Ser  
 355 360 365  
 Arg Glu Gln Glu His Ser Glu Ala Ser Lys Ala Arg Ser Ser Leu Asp  
 370 375 380  
 Ser Glu Asp Val Glu Asn Lys Ser Lys Pro Val Cys His Glu Gln Pro  
 385 390 395 400  
 Ser Ala Thr Pro Glu Ser Asp Ala Lys Gly Ser Asp Gly Ala Gly Asp  
 405 410 415  
 Arg Lys Gln Val Asp Arg Ser Ser Cys Gly Ser Asn Thr Pro Ser Ser  
 420 425 430  
 Ser Asp Asp Val Glu Ala Asp Ala Ser Glu Arg Gln Glu Asp Gly Thr  
 435 440 445  
 Asn Gly Glu Val Lys Glu Thr Asn Glu Asp Thr Asn Lys Pro Gln Thr  
 450 455 460  
 Ser Glu Ser Asn Ala Arg Arg Ser Arg Ile Ser Ser Asn Ile Thr Asp  
 465 470 475 480  
 Pro Trp Lys Ser Val Ser Asp Glu Gly Arg Ile Ala Phe Gln Ala Leu  
 485 490 495  
 Phe Ser Arg Glu Val Leu Pro Gln Ser Phe Thr Tyr Arg Glu Glu His  
 500 505 510  
 Arg Glu Glu Glu Gln Gln Gln Gln Glu Gln Arg Tyr Pro Met Ala Leu  
 515 520 525  
 Asp Leu Asn Phe Thr Ala Gln Leu Thr Pro Val Asp Asp Gln Glu Glu  
 530 535 540  
 Lys Arg Asn Thr Gly Phe Leu Gly Ile Gly Leu Asp Ala Ser Lys Leu  
 545 550 555 560  
 Met Ser Arg Gly Arg Thr Gly Phe Lys Pro Tyr Lys Arg Cys Ser Met  
 565 570 575

047-E2F-PCT.ST25.txt

Glu Ala Lys Glu Ser Arg Ile Leu Asn Asn Asn Pro Ile Ile His Val  
580 585 590

Glu Gln Lys Asp Pro Lys Arg Met Arg Leu Glu Thr Gln Ala Ser Thr  
595 600 605

<210> 1875

<211> 954

<212> DNA

<213> Arabidopsis thaliana

<400> 1875  
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gttgtgggtg cttgctttgc cgcctacttc gccggaaact tgtctcagat ggtaacttta 540  
cttcctccga aagaaaaagt taatatttat ggtgatggaa atgtaaaagt ggtgtttgcg 600  
gatgaagatg atatcgcaaa atacaccgcg aaaacgttaa acgatccacg gacattaaac 660  
aaaacgtgta atattagacc tcccgacaac gttctcacgc agttggaatt agttcagatc 720  
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gccaacattg aacaaatgga gattccacac caagcaggga taggacattt ctatcacatt 840  
ttctatgaag gatgtctcac tgatcacgaa gtcggagaag acgaagaagc ttctagtctt 900  
tatcctgacg tcaagtacaa acgcatggat gattacttaa gaatgttcct ctga 954

<210> 1876

<211> 317

<212> PRT

<213> Arabidopsis thaliana

&lt;400&gt; 1876

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20     25
Gly His Glu Thr Tyr Val Leu Gln Arg Pro Glu Ile Gly Leu Glu Ile
35     40     45
Glu Lys Val Gln Leu Phe Leu Ser Phe Lys Lys Leu Gly Ala Arg Ile
50     55     60
Val Glu Gly Ser Phe Ser Asp His Gln Ser Leu Val Ser Ala Val Lys
65     70     75     80
Leu Val Asp Val Val Val Ser Ala Met Ser Gly Val His Phe Arg Ser
85     90     95
His Asn Ile Leu Val Gln Leu Lys Leu Val Glu Ala Ile Lys Glu Ala
100    105    110
Gly Asn Val Lys Arg Phe Leu Pro Ser Glu Phe Gly Met Asp Pro Pro
115    120    125
Arg Met Gly His Ala Leu Pro Pro Gly Arg Glu Thr Phe Asp Gln Lys
130    135    140
Met Glu Val Arg Gln Ala Ile Glu Ala Ala Gly Ile Pro Tyr Thr Tyr
145    150    155    160
Val Val Gly Ala Cys Phe Ala Ala Tyr Phe Ala Gly Asn Leu Ser Gln
165    170    175
Met Val Thr Leu Leu Pro Pro Lys Glu Lys Val Asn Ile Tyr Gly Asp
180    185    190
Gly Asn Val Lys Val Val Phe Ala Asp Glu Asp Asp Ile Ala Lys Tyr
195    200    205
Thr Ala Lys Thr Leu Asn Asp Pro Arg Thr Leu Asn Lys Thr Val Asn
210    215    220
Ile Arg Pro Pro Asp Asn Val Leu Thr Gln Leu Glu Leu Val Gln Ile
225    230    235    240

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047-E2F-PCT.ST25.txt

Trp Glu Lys Leu Thr Gly Lys Glu Leu Glu Lys Thr Asn Ile Ala Ala  
245 250 255

Gln Asp Phe Leu Ala Asn Ile Glu Gln Met Glu Ile Pro His Gln Ala  
260 265 270

Gly Ile Gly His Phe Tyr His Ile Phe Tyr Glu Gly Cys Leu Thr Asp  
275 280 285

His Glu Val Gly Glu Asp Glu Glu Ala Ser Ser Leu Tyr Pro Asp Val  
290 295 300

Lys Tyr Lys Arg Met Asp Asp Tyr Leu Arg Met Phe Leu  
305 310 315

<210> 1877

<211> 438

<212> DNA

<213> Arabidopsis thaliana

<400> 1877  
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gagactgtca ctttccctta caatccaccc aaaagcgag agccaatcaa gtttgaggct 240  
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aaaaaggagg cgacgggtga tgatgatcag aaagatgatg atgaggatga tcaatcatct 420  
gatgggcatg aagactag 438

<210> 1878

<211> 145

<212> PRT

<213> Arabidopsis thaliana

<400> 1878

Met Ala Glu Glu Ala Gln Val Asp Arg Ser Asn Gly Ser Asp Ser Ser  
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047-E2F-PCT.ST25.txt

Ser Pro Pro Ile Lys Leu Pro Pro Phe Ile Thr Asn Leu Phe Ala Phe  
20 25 30

Leu Gln Pro Lys Pro Pro Pro Ala Thr Ile Asp Ala Asn Ala Pro Lys  
35 40 45

Pro Thr Gly Glu Lys Glu Pro Leu Lys Ser Thr Tyr Glu Thr Val Thr  
50 55 60

Phe Pro Tyr Asn Pro Pro Lys Ser Ala Glu Pro Ile Lys Phe Glu Ala  
65 70 75 80

Glu Pro Ser Ser Gly Arg Thr Ser Asn Ser Val Ile Leu Trp Gln Val  
85 90 95

Tyr Ala Leu Gly Gly Phe Leu Val Leu Lys Trp Ala Trp Ala Arg Trp  
100 105 110

Asn Glu Arg Asn Glu Arg Ser Asp Lys Lys Glu Ala Thr Gly Asp Asp  
115 120 125

Asp Gln Lys Asp Asp Asp Glu Asp Asp Gln Ser Ser Asp Gly His Glu  
130 135 140

Asp  
145

<210> 1879

<211> 1245

<212> DNA

<213> Arabidopsis thaliana

<400> 1879

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gctgtagtgg aaagaacatc ttggatcca agtgaagttg gtgatatcgt tgttggtacc 180

gtgatagcgc ctggttctca gagagcaatg gagtgtagag ttgcagctta ttttgctggt 240

tttctgact cgtgcccagt tagaactgtc aatagacaat gctcatcagg actacaagca 300

gttgctgatg ttgctgcttc cattagagct ggttattacg acattggtat tgggtctgga 360

gtggaatcaa tgtcaactga tcatattcct ggaggcggct ttcattggctc taatccaaga 420

gcacaggatt tcccaaaagc ccgtgattgt ttgcttcaa tgggaattac ttctgaaaac 480

047-E2F-PCT.ST25.txt

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<210> 1880

<211> 414

<212> PRT

<213> Arabidopsis thaliana

<400> 1880

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20	25	30
Asp Leu Leu Ala Ser Val	Leu Lys Ala Val Val	Glu Arg Thr Ser Leu
35	40	45
Asp Pro Ser Glu Val	Gly Asp Ile Val Val	Gly Thr Val Ile Ala Pro
50	55	60
Gly Ser Gln Arg Ala Met	Glu Cys Arg Val	Ala Ala Tyr Phe Ala Gly
65	70	75
Phe Pro Asp Ser Val	Pro Val Arg Thr Val	Asn Arg Gln Cys Ser Ser
85	90	95

047-E2F-PCT.ST25.txt

Gly Leu Gln Ala Val Ala Asp Val Ala Ala Ser Ile Arg Ala Gly Tyr  
100 105 110

Tyr Asp Ile Gly Ile Gly Ala Gly Val Glu Ser Met Ser Thr Asp His  
115 120 125

Ile Pro Gly Gly Gly Phe His Gly Ser Asn Pro Arg Ala Gln Asp Phe  
130 135 140

Pro Lys Ala Arg Asp Cys Leu Leu Pro Met Gly Ile Thr Ser Glu Asn  
145 150 155 160

Val Ala Glu Arg Phe Gly Val Thr Arg Glu Glu Gln Asp Met Ala Ala  
165 170 175

Val Glu Ser His Lys Arg Ala Ala Ala Ile Ala Ser Gly Lys Leu  
180 185 190

Lys Asp Glu Ile Ile Pro Val Ala Thr Lys Ile Val Asp Pro Glu Thr  
195 200 205

Lys Ala Glu Lys Ala Ile Val Val Ser Val Asp Asp Gly Val Arg Pro  
210 215 220

Asn Ser Asn Met Ala Asp Leu Ala Lys Leu Lys Thr Val Phe Lys Gln  
225 230 235 240

Asn Gly Ser Thr Thr Ala Gly Asn Ala Ser Gln Ile Ser Asp Gly Ala  
245 250 255

Gly Ala Val Leu Leu Met Lys Arg Ser Leu Ala Met Lys Lys Gly Leu  
260 265 270

Pro Ile Leu Gly Val Phe Arg Ser Phe Ala Val Thr Gly Val Glu Pro  
275 280 285

Ser Val Met Gly Ile Gly Pro Ala Val Ala Ile Pro Ala Ala Thr Lys  
290 295 300

Leu Ala Gly Leu Asn Val Ser Asp Ile Asp Leu Phe Glu Ile Asn Glu  
305 310 315 320

Ala Phe Ala Ser Gln Tyr Val Tyr Ser Cys Lys Lys Leu Glu Leu Asp  
325 330 335

Met Glu Lys Val Asn Val Asn Gly Gly Ala Ile Ala Ile Gly His Pro  
340 345 350



047-E2F-PCT.ST25.txt

Leu Gly Ala Thr Gly Ala Arg Cys Val Ala Thr Leu Leu His Glu Met  
355 360 365

Lys Arg Arg Gly Lys Asp Cys Arg Phe Gly Val Ile Ser Met Cys Ile  
370 375 380

Gly Thr Gly Met Gly Ala Ala Ala Val Phe Glu Arg Gly Asp Ser Val  
385 390 395 400

Asp Asn Leu Ser Asn Ala Arg Val Ala Asn Gly Asp Ser His  
405 410

<210> 1881

<211> 894

<212> DNA

<213> Arabidopsis thaliana

<400> 1881  
atggcttcaa gttcaacttc attcccggtta accaccgcgc caccgcaggg tgtcagggtt 60  
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<210> 1882

<211> 297

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1882

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20 25 30Gln Thr Ala Phe Gln Leu Gly Lys Thr Lys Gly Asp Asp Ser Glu  
35 40 45Gly Lys Gln Lys Gly Lys Asn Pro Phe Gln Phe Asp Phe Gly Lys Leu  
50 55 60Pro Asp Met Lys Ser Leu Ile Pro Val Val Thr Asn Pro Ser Thr Gly  
65 70 75 80Leu Val Phe Gly Asn Asn Arg Lys Lys Asp Pro Gly Thr Ile Phe Val  
85 90 95Ala Gly Ala Thr Gly Gln Ala Gly Ile Arg Ile Ala Gln Thr Leu Leu  
100 105 110Gln Arg Gly Phe Ser Val Arg Ala Gly Val Pro Asp Leu Gly Ala Ala  
115 120 125Gln Asp Leu Ala Arg Val Ala Ala Thr Tyr Lys Ile Leu Ser Asn Asp  
130 135 140Glu Val Lys Arg Leu Asn Ala Val Gln Ser Pro Phe Gln Asp Ala Glu  
145 150 155 160Ser Ile Ala Lys Ala Ile Gly Asn Ala Thr Lys Val Val Val Thr Val  
165 170 175Gly Ala Thr Glu Asn Gly Pro Asp Ala Gln Val Ser Thr Ser Asp Ala  
180 185 190Leu Leu Val Val Gln Ala Ala Glu Leu Ala Gly Val Ser His Val Ala  
195 200 205Ile Val Tyr Asp Gly Thr Ile Ser Gly Ser Thr Tyr Asn Val Leu Asp  
210 215 220

Gly Ile Thr Ser Phe Phe Gly Asn Leu Phe Ala Lys Ser Gln Pro Leu  
 225 230 235 240

Thr Ile Ser Asp Leu Ile Glu Lys Val Ala Gln Thr Asp Val Ala Tyr  
 245 250 255

Thr Leu Ile Lys Thr Ser Leu Thr Glu Asp Phe Ser Pro Glu Lys Ala  
 260 265 270

Tyr Asn Val Val Val Ser Ala Glu Gly Ser Asn Ser Gly Ser Gly Ser  
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Ser Ser Ser Glu Ala Tyr Lys Val Met  
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<210> 1883

<211> 1938

<212> DNA

<213> Arabidopsis thaliana

<400> 1883  
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 Leu Cys Leu Asp Asn Val Leu Gly Glu Asp Glu Asn Met Ile Arg  
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 Gly Phe Val Asp Pro Tyr Ile Glu Ala Leu Ile Asn Ser Leu His  
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1205

1210

1215

Ser	Leu	Phe	Ile	Gly	Asp	Ile	Leu	Lys	Arg	Lys	Ser	Val	Lys	Tyr
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His	Gly	Glu	Arg	Glu	Ile	Lys	Ile	Leu	Lys	Leu	Leu	Ser	Lys	Arg
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Met	Gln	Asp	Arg	Ser	His	Val	Met	Lys	Tyr	Leu	Asp	Val	Leu	Leu
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Ser	Phe	Leu	Asn	Lys	Ser	Val	Lys	Asp	Pro	Gly	Met	Val	Ser	Leu
	1265					1270					1275			
Leu	Leu	Leu	Leu	Asn	Asp	Ile	Arg	Arg	Glu	Ala	Leu	Leu	Ala	Ile
	1280					1285					1290			
Gln	Asp	Ile	Ile	Ala	Tyr	Leu	Gly	Met	Glu	Ser	Thr	Ser	Lys	Ile
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Ile	Asn	Thr	Val	Ser	Pro	Leu	Leu	Val	Asp	Ala	Glu	Leu	Asp	Val
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Arg	Leu	Cys	Ile	Cys	Asp	Leu	Leu	Glu	Ser	Leu	Ala	Lys	Ile	Asp
	1325					1330					1335			
Phe	Ser	Leu	Asp	Asp	Val	Arg	Thr	Glu	Ala	Leu	Val	Phe	Phe	Ile
	1340					1345					1350			
Asp	Phe	Ser	Ala	Ser	Ile	Leu	Cys	Arg	Glu	Ala	Pro	Ala	His	Ser
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Glu	Phe	Gly	Lys	Glu	Val	Lys	Asn	Ala	Asp	Val	Ser	Trp	Thr	Gly
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Asp	Arg	Val	Leu	Cys	Ile	Leu	Arg	Asn	Phe	Ile	Leu	Lys	His	Ile
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Gly	Asp	Ala	Ile	Asn	Arg	Gly	Gly	Ile	Ile	Ile	Lys	Glu	Trp	Ile
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	1430					1435					1440			



Phe Phe Lys Ala Ile Val His Ile Gln Ala His Arg Arg Ala Arg  
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 His Thr Lys Lys Gly Lys Ile Leu Leu Arg Leu Ile Cys Leu Ile  
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 1565 1570 1575  
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Ser Asn Pro Thr Cys Gly Lys Leu Asp His Cys Leu Val Asp Leu  
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 Gly Ile Asn Asn Arg Ser Gly Leu Gly Asp Gln Val Ser Leu Pro  
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 1820 1825 1830  
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 1850 1855 1860  
 Asp Asn Thr Asp Glu Glu Leu Leu Ser Lys Cys Phe Thr Ser Leu  
 1865 1870 1875  
 Val Lys Phe Pro Leu Pro Ser Leu Thr Ser Glu Ala Asp Glu Leu  
 1880 1885 1890  
 Lys Thr Ala Leu Leu Thr Ile Ala Gln Ser Ala Val Ser Ser Ser  
 1895 1900 1905  
 Ser Pro Leu Val Gln Ser Cys Leu Lys Leu Leu Thr Thr Leu Leu  
 1910 1915 1920

Lys Asn Ile Asn Ile Thr Leu Ser Ser Glu Gln Leu Lys Met Leu  
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 Ile Gln Phe Pro Ile Phe Ile Asp Leu Glu Ser Asp Ser Ser Phe  
 1940 1945 1950  
 Val Thr Leu Ser Leu Leu Lys Ala Ile Met Asn Arg Lys Leu Val  
 1955 1960 1965  
 Val Pro Glu Ile Tyr Asp Ile Ala Ile Gln Val Ser Lys Leu Met  
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 1985 1990 1995  
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 2000 2005 2010  
 Glu Gln His Val Asn Phe Leu Leu Glu Asn Leu Arg Tyr Glu Phe  
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&lt;211&gt; 894

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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&lt;210&gt; 1888

&lt;211&gt; 297

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1888

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Gln Thr Ala Phe Gln Leu Gly Lys Thr Lys Gly Asp Asp Asp Ser Glu
35           40           45

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Gly Lys Gln Lys Gly Lys Asn Pro Phe Gln Phe Asp Phe Gly Lys Leu  
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85 90 95

Ala Gly Ala Thr Gly Gln Ala Gly Ile Arg Ile Ala Gln Thr Leu Leu  
100 105 110

Gln Arg Gly Phe Ser Val Arg Ala Gly Val Pro Asp Leu Gly Ala Ala  
115 120 125

Gln Asp Leu Ala Arg Val Ala Ala Thr Tyr Lys Ile Leu Ser Asn Asp  
130 135 140

Glu Val Lys Arg Leu Asn Ala Val Gln Ser Pro Phe Gln Asp Ala Glu  
145 150 155 160

Ser Ile Ala Lys Ala Ile Gly Asn Ala Thr Lys Val Val Val Thr Val  
165 170 175

Gly Ala Thr Glu Asn Gly Pro Asp Ala Gln Val Ser Thr Ser Asp Ala  
180 185 190

Leu Leu Val Val Gln Ala Ala Glu Leu Ala Gly Val Ser His Val Ala  
195 200 205

Ile Val Tyr Asp Gly Thr Ile Ser Gly Ser Thr Tyr Asn Val Leu Asp  
210 215 220

Gly Ile Thr Ser Phe Phe Gly Asn Leu Phe Ala Lys Ser Gln Pro Leu  
225 230 235 240

Thr Ile Ser Asp Leu Ile Glu Lys Val Ala Gln Thr Asp Val Ala Tyr  
245 250 255

Thr Leu Ile Lys Thr Ser Leu Thr Glu Asp Phe Ser Pro Glu Lys Ala  
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295

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 ctgagcgaga ccgaagagtc ttcaacaac tacgaggaaa attacccgaa gaagacagag 420  
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 gcaaacttca aggaagagtt caacaacaac aagtacgatg aaaattacgc caaggaagag 540  
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 gagaacagtt ttaaggatcc gtacaactcc aagtgaggaga agaacttgat gaacgaacag 960  
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 <211> 335  
 <212> PRT  
 <213> Arabidopsis thaliana

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Lys Phe His Arg Glu Ser Pro Lys Asp Gln Asn Pro Asn Ser Phe Ile  
35 40 45

Pro Leu Glu Thr Ser Glu Lys Thr Thr Val Glu Glu Ser Val Leu Asn  
50 55 60

Lys Lys Glu Gln Glu Gln Asp Pro Thr Phe Val Pro Glu Ser Gly Asn  
65 70 75 80

Gly Tyr Gly Leu Tyr Gly His Glu Thr Thr Tyr Asn Asn Asn Asn Asp  
85 90 95

Asn Lys Glu Glu Phe Asn Asn Asn Asn Lys Asn Asp Glu Lys Val Asn  
100 105 110

Ser Lys Thr Phe Ser Thr Pro Ser Leu Ser Glu Thr Glu Glu Ser Phe  
115 120 125

Asn Asn Tyr Glu Glu Asn Tyr Pro Lys Lys Thr Glu Asn Tyr Gly Thr  
130 135 140

Lys Gly Tyr Asn Asn Glu Glu Phe Asn Asn Asn Asn Lys Tyr Asp  
145 150 155 160

Ala Asn Phe Lys Glu Glu Phe Asn Asn Asn Lys Tyr Asp Glu Asn Tyr  
165 170 175

Ala Lys Glu Glu Phe Asn Asn Asn Asn Asn Asn Asn Tyr Asn Tyr  
180 185 190

Lys Tyr Asp Glu Asn Val Lys Glu Glu Ser Phe Pro Glu Asn Asn Glu  
195 200 205

Asp Asn Lys Lys Asn Val Tyr Asn Ser Asn Ala Tyr Gly Thr Glu Leu  
210 215 220

Glu Arg Glu Thr Pro Tyr Lys Gly Tyr Ser His Asn Leu Glu Arg Gln  
225 230 235 240

Gly Met Ser Asp Thr Arg Phe Met Glu Lys Gly Ser Tyr Tyr Tyr Asp  
245 250 255

Leu Tyr Asn Asp Arg Asn His Gly His Tyr Tyr Arg Lys Ser His Ser  
2785

260

Lys Ser Pro Ala Gly Tyr Tyr Ser Ser Pro Ala Thr Glu Thr Asn Tyr  
275 280

Glu Gln Gln Ser Tyr Ser Tyr Gly Asn Asn Asn Glu Glu Asn Ser Phe  
290 295 300

Lys Asp Pro Tyr Asn Ser Lys Trp Glu Lys Asn Leu Met Asn Glu Gln  
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325 330 335

<210> 1891

<211> 726

<212> DNA

<213> Arabidopsis thaliana

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<210> 1892

<211> 241

<212> PRT



<213> *Arabidopsis thaliana*

&lt;400&gt; 1892

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Thr Asn Gln Leu His Asn Phe His Ser Glu Thr Gly Pro Arg Thr Ile  
 35 40 45

Thr Asn Gln Ser Pro Lys Pro Asn Ser Thr Leu Asn Gln Arg Lys Pro  
 50 55 60

Pro Leu Pro Asn Leu Ser Val Ser Arg Thr Val Ser Thr Lys Thr Glu  
 65 70 75 80

Lys Glu Glu Glu Glu Arg His Tyr Arg Gly Val Arg Arg Arg Pro Trp  
 85 90 95

Gly Lys Tyr Ala Ala Glu Ile Arg Asp Pro Asn Lys Lys Gly Cys Arg  
 100 105 110

Ile Trp Leu Gly Thr Tyr Asp Thr Ala Val Glu Ala Gly Arg Ala Tyr  
 115 120 125

Asp Gln Ala Ala Phe Gln Leu Arg Gly Arg Lys Ala Ile Leu Asn Phe  
 130 135 140

Pro Leu Asp Val Arg Val Thr Ser Glu Thr Cys Ser Gly Glu Gly Val  
 145 150 155 160

Ile Gly Leu Gly Lys Arg Lys Arg Asp Lys Gly Ser Pro Pro Glu Glu  
 165 170 175

Glu Lys Ala Ala Arg Val Lys Val Glu Glu Glu Glu Ser Asn Thr Ser  
 180 185 190

Glu Thr Thr Glu Ala Glu Val Glu Pro Val Val Pro Leu Thr Pro Ser  
 195 200

Ser Trp Met Gly Phe Trp Asp Val Gly Ala Gly Asp Gly Ile Phe Ser  
 210 215 220

Ile Pro Pro Leu Ser Pro Thr Ser Pro Asn Phe Ser Val Ile Ser Val  
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225

230

235

240

Thr

&lt;210&gt; 1893

&lt;211&gt; 1152

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1893

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&lt;210&gt; 1894

&lt;211&gt; 383

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1894

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Val Ser Ser Pro Lys Leu Gly Phe Thr Gln Ser Thr Ala Ser Val Ser  
 35 40 45

Gly Ser Leu Thr Thr Ser Pro Val Ala Asp Ile Phe Pro Glu Gly Asp  
 50 55 60

Cys Asp Pro Ser Val Leu Asp Tyr Ile Pro Thr Ile Arg Ser Gly Ser  
 65 70 75 80

Phe Ala Asp Ile Gly Pro Lys Arg Asn Met Glu Asp Glu His Ile Arg  
 85 90 95

Ile Asp Asp Leu Ser Ser Gln Val Gly Ser Leu Phe Glu Leu Pro Lys  
 100 105 110

Pro Ser Ala Phe Tyr Ala Val Phe Asp Gly His Gly Gly Pro Glu Ala  
 115 120 125

Ala Ala Tyr Val Arg Glu Asn Ala Ile Arg Phe Phe Phe Glu Asp Glu  
 130 135 140

Gln Phe Pro Gln Thr Ser Glu Val Ser Ser Val Tyr Val Glu Glu Val  
 145 150 155 160

Glu Thr Ser Leu Arg Asn Ala Phe Leu Gln Ala Asp Leu Ala Leu Val  
 165 170 175

Glu Asp Cys Ser Ile Ser Asp Ser Cys Gly Thr Thr Ala Leu Thr Ala  
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Leu Ile Cys Gly Arg Leu Leu Met Val Ala Asn Ala Gly Asp Cys Arg  
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Ala Val Leu Cys Arg Lys Gly Arg Ala Ile Asp Met Ser Glu Asp His  
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Lys Pro Ile Asn Leu Leu Glu Arg Arg Arg Val Glu Glu Ser Gly Gly  
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 260 265 270  
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 275 280 285  
 Glu Phe Leu Val Ile Gly Cys Asp Gly Ile Trp Asp Val Leu Thr Ser  
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 Gln Glu Ala Val Ser Ile Val Arg Arg Gly Leu Asn Arg His Asn Asp  
 305 310 315 320  
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<210> 1895

<211> 948

<212> DNA

<213> Arabidopsis thaliana

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agagagtttg	agatcgaaga	agctccggcg	atggaatttg	tggaatctgg	gaaagagctg	900
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<210> 1896

<211> 315

<212> PRT

<213> Arabidopsis thaliana

<400> 1896

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Pro	Gln	Trp	Asp	Gln	Ile	Asn	Asp	Pro	Thr	Ala	Thr	Ile	Ser	Ser	Pro
			20					25					30		

Phe	Ser	Ser	Val	Asn	Leu	Asn	Ser	Val	Asn	Asp	Tyr	Pro	His	Ser	Pro
			35				40					45			

Ser	Pro	Tyr	Leu	Asp	Ser	Phe	Ala	Ser	Leu	Phe	Arg	Tyr	Leu	Pro	Ser
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Asn	Glu	Leu	Thr	Asn	Asp	Ser	Asp	Ser	Ser	Ser	Gly	Asp	Glu	Ser	Ser
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Pro	Leu	Thr	Asp	Ser	Phe	Ser	Ser	Asp	Glu	Phe	Arg	Ile	Tyr	Glu	Phe
				85					90					95	

Lys	Ile	Arg	Arg	Cys	Ala	Arg	Gly	Arg	Ser	His	Asp	Trp	Thr	Glu	Cys
			100					105					110		

Pro	Phe	Ala	His	Pro	Gly	Glu	Lys	Ala	Arg	Arg	Arg	Asp	Pro	Arg	Lys

115

120

125

Phe His Tyr Ser Gly Thr Ala Cys Pro Glu Phe Arg Lys Gly Ser Cys  
 130 135 140

Arg Arg Gly Asp Ser Cys Glu Phe Ser His Gly Val Phe Glu Cys Trp  
 145 150 155 160

Leu His Pro Ser Arg Tyr Arg Thr Gln Pro Cys Lys Asp Gly Thr Ser  
 165 170 175

Cys Arg Arg Arg Ile Cys Phe Phe Ala His Thr Thr Glu Gln Leu Arg  
 180 185 190

Val Leu Pro Cys Ser Leu Asp Pro Asp Leu Gly Phe Phe Ser Gly Leu  
 195 200 205

Ala Thr Ser Pro Thr Ser Ile Leu Val Ser Pro Ser Phe Ser Pro Pro  
 210 215 220

Ser Glu Ser Pro Pro Leu Ser Pro Ser Thr Gly Glu Leu Ile Ala Ser  
 225 230 235 240

Met Arg Lys Met Gln Leu Asn Gly Gly Gly Cys Ser Trp Ser Ser Pro  
 245 250 255

Met Arg Ser Ala Val Arg Leu Pro Phe Ser Ser Ser Leu Arg Pro Ile  
 260 265 270

Gln Ala Ala Thr Trp Pro Arg Ile Arg Glu Phe Glu Ile Glu Glu Ala  
 275 280 285

Pro Ala Met Glu Phe Val Glu Ser Gly Lys Glu Leu Arg Ala Glu Met  
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Tyr Ala Arg Leu Ser Arg Glu Asn Ser Leu Gly  
 305 310 315

&lt;210&gt; 1897

&lt;211&gt; 447

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

<400> 1897  
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## 047-E2F-PCT.ST25.txt

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 aagggtgttc tctcgatatg ttcgctgtta acagatccaa atccagatga ccttttggtg 360  
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 tggactcaga agtatgccat gggctaa 447

<210> 1898

<211> 148

<212> PRT

<213> Arabidopsis thaliana

<400> 1898

Met Ala Ser Lys Arg Ile Leu Lys Glu Leu Lys Asp Leu Gln Lys Asp  
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Trp Gln Ala Thr Ile Met Gly Pro Ala Glu Ser Pro Tyr Ser Gly Gly  
35 40 45

Val Phe Leu Val Thr Ile His Phe Pro Pro Asp Tyr Pro Phe Lys Pro  
50 55 60

Pro Lys Val Ala Phe Arg Thr Lys Val Phe His Pro Asn Ile Asn Ser  
65 70 75 80

Asn Gly Ser Ile Cys Leu Asp Ile Leu Lys Glu Gln Trp Ser Pro Ala  
85 90 95

Leu Thr Ile Ser Lys Val Leu Leu Ser Ile Cys Ser Leu Leu Thr Asp  
100 105 110

Pro Asn Pro Asp Asp Pro Leu Val Pro Glu Ile Ala His Met Tyr Lys  
115 120 125

Thr Asp Arg Ala Lys Tyr Glu Ala Thr Ala Arg Asn Trp Thr Gln Lys  
130 135 140

Tyr Ala Met Gly  
145

<210> 1899

<211> 1065

<212> DNA

<213> *Arabidopsis thaliana*

<400> 1899

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ctgatgaaga tgaaccctct tgtctcttta cttcatctct acgatgttgt caatgctcct	240
ggcgtcactg ctgacgtcag tcatatggac actggagctg ttgtccgcgg gttcttggga	300
gcgaagcagc ttgaggacgc gctaacgggt atggatcttg tgatcatacc agccggtata	360
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cctgtgaact ctactgtccc cattgccgct gaggttttca agaaagctgg aacttatgat	540
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<210> 1900

<211> 354

<212> PRT

<213> *Arabidopsis thaliana*



&lt;400&gt; 1900

Met Glu Phe Arg Gly Asp Ala Asn Gln Arg Ile Ala Arg Ile Ser Ala  
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His Leu Thr Pro Gln Met Glu Ala Lys Asn Ser Val Ile Gly Arg Glu  
 20 25 30

Asn Cys Arg Ala Lys Gly Gly Asn Pro Gly Phe Lys Val Ala Ile Leu  
 35 40 45

Gly Ala Ala Gly Gly Ile Gly Gln Ser Leu Ser Leu Leu Met Lys Met  
 50 55 60

Asn Pro Leu Val Ser Leu Leu His Leu Tyr Asp Val Val Asn Ala Pro  
 65 70 75 80

Gly Val Thr Ala Asp Val Ser His Met Asp Thr Gly Ala Val Val Arg  
 85 90 95

Gly Phe Leu Gly Ala Lys Gln Leu Glu Asp Ala Leu Thr Gly Met Asp  
 100 105 110

Leu Val Ile Ile Pro Ala Gly Ile Pro Arg Lys Pro Gly Met Thr Arg  
 115 120 125

Asp Asp Leu Phe Lys Ile Asn Ala Gly Ile Val Lys Thr Leu Cys Glu  
 130 135 140

Gly Val Ala Lys Cys Cys Pro Asn Ala Ile Val Asn Leu Ile Ser Asn  
 145 150 155 160

Pro Val Asn Ser Thr Val Pro Ile Ala Ala Glu Val Phe Lys Lys Ala  
 165 170 175

Gly Thr Tyr Asp Pro Lys Lys Leu Leu Gly Val Thr Thr Leu Asp Val  
 180 185 190

Ala Arg Ala Asn Thr Phe Val Ala Glu Val Leu Gly Leu Asp Pro Arg  
 195 200 205

Glu Val Asp Val Pro Val Val Gly Gly His Ala Gly Val Thr Ile Leu  
 210 215 220

Pro Leu Leu Ser Gln Val Lys Pro Pro Ser Ser Phe Thr Pro Gln Glu  
 225 230 235 240

Ile Glu Tyr Leu Thr Asn Arg Ile Gln Asn Gly Gly Thr Glu Val Val  
 Page 2795

Glu Ala Lys Ala Gly Ala Gly Ser Ala Thr Leu Ser Met Ala Tyr Ala  
260 265 270

Ala Ala Lys Phe Ala Asp Ala Cys Leu Arg Gly Leu Arg Gly Asp Ala  
275 280 285

Asn Val Val Glu Cys Ser Phe Val Ala Ser Gln Val Thr Glu Leu Ala  
290 295 300

Phe Phe Ala Thr Lys Val Arg Leu Gly Arg Thr Gly Ala Glu Glu Val  
305 310 315 320

Tyr Gln Leu Gly Pro Leu Asn Glu Tyr Glu Arg Ile Gly Leu Glu Lys  
325 330 335

Ala Lys Asp Glu Leu Ala Gly Ser Ile Gln Lys Gly Val Glu Phe Ile  
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Arg Lys

<210> 1901

<211> 1191

<212> DNA

<213> *Arabidopsis thaliana*

<400> 1901

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catggctcga aggactctcc tcttgatata attgccatta atgacactgg tggcgtcaag	300
caggcttcgc atttacttaa atacgactct actctcggaa tctttgatgc tgatgtcaaa	360
ccttctggag agactgcaat ctctgttgat ggaagatca tccaagttgt ctctaaccga	420
aaccgtctc ttctcccttg gaaggagcta ggaattgaca ttgtcatcga aggaaccgga	480
gtgtttgtgg atagagaagg tgcagggaac cacattgaag ctggtgccaa gaaggttatc	540
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&lt;210&gt; 1902

&lt;211&gt; 396

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1902

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Met Ala Ser Val Thr Phe Ser Val Pro Lys Gly Phe Thr Glu Phe Ser
1 5 10 15

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Gly Leu Arg Ser Ser Ser Ala Ser Leu Pro Phe Gly Lys Lys Leu Ser
20 25 30

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Ser Asp Glu Phe Val Ser Ile Val Ser Phe Gln Thr Ser Ala Met Gly
35 40 45

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Ser Ser Gly Gly Tyr Arg Lys Gly Val Thr Glu Ala Lys Leu Lys Val
50 55 60

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Ala Ile Asn Gly Phe Gly Arg Ile Gly Arg Asn Phe Leu Arg Cys Trp
65 70 75 80

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His Gly Arg Lys Asp Ser Pro Leu Asp Ile Ile Ala Ile Asn Asp Thr
85 90 95

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Gly Gly Val Lys Gln Ala Ser His Leu Leu Lys Tyr Asp Ser Thr Leu
100 105 110

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Gly Ile Phe Asp Ala Asp Val Lys Pro Ser Gly Glu Thr Ala Ile Ser
115 120 125

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Val Asp Gly Lys Ile Ile Gln Val Val Ser Asn Arg Asn Pro Ser Leu  
130 135

Leu Pro Trp Lys Glu Leu Gly Ile Asp Ile Val Ile Glu Gly Thr Gly  
145 150 155 160

Val Phe Val Asp Arg Glu Gly Ala Gly Lys His Ile Glu Ala Gly Ala  
165 170 175

Lys Lys Val Ile Ile Thr Ala Pro Gly Lys Gly Asp Ile Pro Thr Tyr  
180 185 190

Val Val Gly Val Asn Ala Asp Ala Tyr Ser His Asp Glu Pro Ile Ile  
195 200 205

Ser Asn Ala Ser Cys Thr Thr Asn Cys Leu Ala Pro Phe Val Lys Val  
210 215 220

Leu Asp Gln Lys Phe Gly Ile Ile Lys Gly Thr Met Thr Thr Thr His  
225 230 235 240

Ser Tyr Thr Gly Asp Gln Arg Leu Leu Asp Ala Ser His Arg Asp Leu  
245 250 255

Arg Arg Ala Arg Ala Ala Ala Leu Asn Ile Val Pro Thr Ser Thr Gly  
260 265 270

Ala Ala Lys Ala Val Ala Leu Val Leu Pro Asn Leu Lys Gly Lys Leu  
275 280 285

Asn Gly Ile Ala Leu Arg Val Pro Thr Pro Asn Val Ser Val Val Asp  
290 295 300

Leu Val Val Gln Val Ser Lys Lys Thr Phe Ala Glu Glu Val Asn Ala  
305 310 315 320

Ala Phe Arg Asp Ser Ala Glu Lys Glu Leu Lys Gly Ile Leu Asp Val  
325 330 335

Cys Asp Glu Pro Leu Val Ser Val Asp Phe Arg Cys Ser Asp Phe Ser  
340 345 350

Thr Thr Ile Asp Ser Ser Leu Thr Met Val Met Gly Asp Asp Met Val  
355 360 365

Lys Val Ile Ala Trp Tyr Asp Asn Glu Trp Gly Tyr Ser Gln Arg Val  
370 375 380

047-E2F-PCT.ST25.txt

Val Asp Leu Ala Asp Ile Val Ala Asn Asn Trp Lys  
385 390 395

<210> 1903

<211> 1065

<212> DNA

<213> Arabidopsis thaliana

<400> 1903

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ctgatgaaga tgaaccctct tgctcttcta cttcatctct acgatgttgt caatgctcct	240
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cctaagaagc tccttggagt tactacactc gatgttgctc gtgccaacac atttgtggca	600
gaagtctctg gccttgatcc aagagaagtc gatgtgccag tagttggggg acacgccgga	660
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tatcagcttg gacccttaaa cgaatacgaa aggattgtgc tggagaaagc aaaagatgaa	1020
ttagccggaa gtattcagaa aggtgttgaa ttcacagaa aatga	1065

<210> 1904

<211> 354

<212> PRT

<213> Arabidopsis thaliana

&lt;400&gt; 1904

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 Asn Cys Arg Ala Lys Gly Gly Asn Pro Gly Phe Lys Val Ala Ile Leu  
 35 40 45  
 Gly Ala Ala Gly Gly Ile Gly Gln Ser Leu Ser Leu Met Lys Met  
 50 55 60  
 Asn Pro Leu Val Ser Leu Leu His Leu Tyr Asp Val Val Asn Ala Pro  
 65 70 75 80  
 Gly Val Thr Ala Asp Val Ser His Met Asp Thr Gly Ala Val Val Arg  
 85 90 95  
 Gly Phe Leu Gly Ala Lys Gln Leu Glu Asp Ala Leu Thr Gly Met Asp  
 100 105 110  
 Leu Val Ile Ile Pro Ala Gly Ile Pro Arg Lys Pro Gly Met Thr Arg  
 115 120 125  
 Asp Asp Leu Phe Lys Ile Asn Ala Gly Ile Val Lys Thr Leu Cys Glu  
 130 135 140  
 Gly Val Ala Lys Cys Cys Pro Asn Ala Ile Val Asn Leu Ile Ser Asn  
 145 150 155 160  
 Pro Val Asn Ser Thr Val Pro Ile Ala Ala Glu Val Phe Lys Lys Ala  
 165 170 175  
 Gly Thr Tyr Asp Pro Lys Lys Leu Leu Gly Val Thr Thr Leu Asp Val  
 180 185 190  
 Ala Arg Ala Asn Thr Phe Val Ala Glu Val Leu Gly Leu Asp Pro Arg  
 195 200 205  
 Glu Val Asp Val Pro Val Val Gly Gly His Ala Gly Val Thr Ile Leu  
 210 215 220  
 Pro Leu Leu Ser Gln Val Lys Pro Pro Ser Ser Phe Thr Pro Gln Glu  
 225 230 235 240

Ile Glu Tyr Leu Thr Asn Arg Ile Gln Asn Gly Gly Thr Glu Val Val  
 245 250 255

Glu Ala Lys Ala Gly Ala Gly Ser Ala Thr Leu Ser Met Ala Tyr Ala  
 260 265 270

Ala Ala Lys Phe Ala Asp Ala Cys Leu Arg Gly Leu Arg Gly Asp Ala  
 275 280 285

Asn Val Val Glu Cys Ser Phe Val Ala Ser Gln Val Thr Glu Leu Ala  
 290 295 300

Phe Phe Ala Thr Lys Val Arg Leu Gly Arg Thr Gly Ala Glu Glu Val  
 305 310 315 320

Tyr Gln Leu Gly Pro Leu Asn Glu Tyr Glu Arg Ile Gly Leu Glu Lys  
 325 330 335

Ala Lys Asp Glu Leu Ala Gly Ser Ile Gln Lys Gly Val Glu Phe Ile  
 340 345 350

Arg Lys

<210> 1905

<211> 1182

<212> DNA

<213> Arabidopsis thaliana

<400> 1905

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 actcaagttg cttatggctc aaagaacgag atcatccgct tcgaagaaac cctttatgga 1140  
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<210> 1906

<211> 393

<212> PRT

<213> Arabidopsis thaliana

<400> 1906

Met Glu Thr Ser Ile Ala Cys Tyr Ser Arg Gly Ile Leu Pro Pro Ser  
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Val Ser Ser Gln Arg Ser Ser Thr Leu Val Ser Pro Pro Ser Tyr Ser  
20 25 30

Thr Ser Ser Ser Phe Lys Arg Leu Lys Ser Ser Ser Ile Phe Gly Asp  
35 40 45

Ser Leu Arg Leu Ala Pro Lys Ser Gln Leu Lys Ala Thr Lys Ala Lys  
50 55 60

Ser Asn Gly Ala Ser Thr Val Thr Lys Cys Glu Ile Gly Gln Ser Leu  
65 70 75 80

Glu Glu Phe Leu Ala Gln Ala Thr Pro Asp Lys Gly Leu Arg Thr Leu  
85 90 95

Leu Met Cys Met Gly Glu Ala Leu Arg Thr Ile Ala Phe Lys Val Arg  
100 105 110

Thr Ala Ser Cys Gly Gly Thr Ala Cys Val Asn Ser Phe Gly Asp Glu  
115 120 125



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Gln Leu Ala Val Asp Met Leu Ala Asp Lys Leu Leu Phe Glu Ala Leu  
130 135 140

Gln Tyr Ser His Val Cys Lys Tyr Ala Cys Ser Glu Glu Val Pro Glu  
145 150 155 160

Leu Gln Asp Met Gly Gly Pro Val Glu Gly Gly Phe Ser Val Ala Phe  
165 170 175

Asp Pro Leu Asp Gly Ser Ser Ile Val Asp Thr Asn Phe Thr Val Gly  
180 185 190

Thr Ile Phe Gly Val Trp Pro Gly Asp Lys Leu Thr Gly Ile Thr Gly  
195 200 205

Gly Asp Gln Val Ala Ala Ala Met Gly Ile Tyr Gly Pro Arg Thr Thr  
210 215 220

Tyr Val Leu Ala Val Lys Gly Phe Pro Gly Thr His Glu Phe Leu Leu  
225 230 235 240

Leu Asp Glu Gly Lys Trp Gln His Val Lys Glu Thr Thr Glu Ile Ala  
245 250 255

Glu Gly Lys Met Phe Ser Pro Gly Asn Leu Arg Ala Thr Phe Asp Asn  
260 265 270

Ser Glu Tyr Ser Lys Leu Ile Asp Tyr Tyr Val Lys Glu Lys Tyr Thr  
275 280 285

Leu Arg Tyr Thr Gly Gly Met Val Pro Asp Val Asn Gln Ile Ile Val  
290 295 300

Lys Glu Lys Gly Ile Phe Thr Asn Val Thr Ser Pro Thr Ala Lys Ala  
305 310 315 320

Lys Leu Arg Leu Leu Phe Glu Val Ala Pro Leu Gly Leu Leu Ile Glu  
325 330 335

Asn Ala Gly Gly Phe Ser Ser Asp Gly His Lys Ser Val Leu Asp Lys  
340 345 350

Thr Ile Ile Asn Leu Asp Asp Arg Thr Gln Val Ala Tyr Gly Ser Lys  
355 360 365

Asn Glu Ile Ile Arg Phe Glu Glu Thr Leu Tyr Gly Thr Ser Arg Leu  
Page 2803

370

375

380

Lys Asn Val Pro Ile Gly Val Thr Ala  
385 390

&lt;210&gt; 1907

&lt;211&gt; 1020

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1907

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gaagacgacc atgaaaacaa agccggagct cggaaataca agatcgccgc aattcctaca	180
gttctaatac cggcataaat cggagttctt ttccctttgt taggcaaagt ctcccttctt	240
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&lt;210&gt; 1908

&lt;211&gt; 339

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1908

Met Lys Thr Lys Asn Val Lys Leu Leu Phe Phe Phe Phe Ser Val Ser  
 1 5 10 15  
 Leu Leu Leu Ile Ala Val Val Asn Ala Ala Glu Gly His Ser His Gly  
 20 25 30  
 Gly Pro Lys Cys Glu Cys Ser His Glu Asp Asp His Glu Asn Lys Ala  
 35 40 45  
 Gly Ala Arg Lys Tyr Lys Ile Ala Ala Ile Pro Thr Val Leu Ile Ala  
 50 55 60  
 Gly Ile Ile Gly Val Leu Phe Pro Leu Leu Gly Lys Val Phe Pro Ser  
 65 70 75 80  
 Leu Arg Pro Glu Thr Cys Phe Phe Phe Val Thr Lys Ala Phe Ala Ala  
 85 90 95  
 Gly Val Ile Leu Ala Thr Gly Phe Met His Val Leu Pro Glu Ala Tyr  
 100 105 110  
 Glu Met Leu Asn Ser Pro Cys Leu Thr Ser Glu Ala Trp Glu Phe Pro  
 115 120 125  
 Phe Thr Gly Phe Ile Ala Met Ile Ala Ala Ile Leu Thr Leu Ser Val  
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 Asp Thr Phe Ala Thr Ser Ser Phe Tyr Lys Ser His Cys Lys Ala Ser  
 145 150 155 160  
 Lys Arg Val Ser Asp Gly Glu Thr Gly Glu Ser Ser Val Asp Ser Glu  
 165 170 175  
 Lys Val Gln Ile Leu Arg Thr Arg Val Ile Ala Gln Val Leu Glu Leu  
 180 185 190  
 Gly Ile Ile Val His Ser Val Val Ile Gly Ile Ser Leu Gly Ala Ser  
 195 200 205  
 Gln Ser Pro Asp Ala Ala Lys Ala Leu Phe Ile Ala Leu Met Phe His  
 210 215 220  
 Gln Cys Phe Glu Gly Leu Gly Leu Gly Gly Cys Ile Ala Gln Gly Lys  
 225 230 235 240  
 Phe Lys Cys Leu Ser Val Thr Ile Met Ser Thr Phe Phe Ala Ile Thr  
 245 250 255 260 265 270 275 280 285 290 295 300 305 310 315 320 325 330 335 340 345 350 355 360 365 370 375 380 385 390 395 400

Thr Pro Ile Gly Ile Val Val Gly Met Gly Ile Ala Asn Ser Tyr Asp  
260 265 270

Glu Ser Ser Pro Thr Ala Leu Ile Val Gln Gly Val Leu Asn Ala Ala  
275 280 285

Ser Ala Gly Ile Leu Ile Tyr Met Ser Leu Val Asp Leu Leu Ala Ala  
290 295 300

Asp Phe Thr His Pro Lys Met Gln Ser Asn Thr Gly Leu Gln Ile Met  
305 310 315 320

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Lys Trp Ala

<210> 1909

<211> 666

<212> DNA

<213> Arabidopsis thaliana

<400> 1909

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gggtgcatca ctattgccaa caccgtgttt ggggctaacc cagccataaa cccaactatt	600
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&lt;210&gt; 1910

&lt;211&gt; 221

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1910

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 20 25 30

Val Ser Ala Asn Thr Ser Ala Asn Gly Val Phe Val Asn Gly Lys Phe  
 35 40 45

Cys Lys Asp Pro Lys Leu Val Thr Ala Asp Asp Phe Phe Phe Ser Gly  
 50 55 60

Leu Gln Thr Ala Arg Pro Ile Thr Ser Pro Val Gly Ser Thr Val Thr  
 65 70 75 80

Ala Val Asn Val Asn Asn Leu Leu Gly Leu Asn Thr Leu Gly Ile Ser  
 85 90 95

Leu Val Arg Ile Asp Tyr Ala Val Asn Gly Gln Asn Pro Pro His Thr  
 100 105 110

His Pro Arg Ala Thr Glu Ile Leu Val Val Glu Gln Gly Thr Leu Leu  
 115 120 125

Val Gly Phe Val Thr Ser Asn Pro Asp Asn Arg Leu Phe Ser Lys Val  
 130 135 140

Leu Asn Glu Gly Asp Val Phe Val Phe Pro Glu Gly Leu Ile His Phe  
 145 150 155 160

Gln Ala Asn Ile Gly Lys Ala Pro Ala Val Ala Phe Ala Ala Leu Ser  
 165 170 175

Ser Gln Asn Pro Gly Val Ile Thr Ile Ala Asn Thr Val Phe Gly Ala  
 180 185 190

Asn Pro Ala Ile Asn Pro Thr Ile Leu Ala Lys Ala Phe Gln Leu Asn  
 195 200 205

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Pro Arg Val Val Met Asp Leu Gln Thr Lys Phe Lys Lys  
210 215 220

<210> 1911

<211> 1182

<212> DNA

<213> Arabidopsis thaliana

<400> 1911

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<210> 1912

<211> 393

<212> PRF

<213> *Arabidopsis thaliana*

&lt;400&gt; 1912

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      20      25      30
Ser Ser Leu Leu Leu Pro Ser Ile Ser Leu Asn Asn Leu Ser Ser Ser
      35      40      45
Lys Asn Ala Ser Phe Gly Phe Ala Ala Lys Asn Leu Ser Arg Ser Arg
      50      55      60
Ile Ser Met Ser Val Ser Ala Gly Ser Gln Ser Thr Thr Val His Asp
 65      70      75
Ser Leu Phe Ala Asp Tyr Lys Pro Thr Ser Ala Phe Leu Phe Pro Gly
      85      90      95
Gln Gly Ala Gln Ala Val Gly Met Gly Lys Glu Ser Gln Ser Val Gly
      100      105      110
Ala Ala Gly Glu Leu Tyr Lys Lys Ala Asn Asp Ile Leu Gly Tyr Asp
      115      120      125
Leu Leu Asp Ile Cys Val Asn Gly Pro Lys Glu Lys Leu Asp Ser Thr
      130      135      140
Val Ile Ser Gln Pro Ala Ile Tyr Val Thr Ser Leu Ala Ala Val Glu
      145      150      155
Leu Leu Arg Val Arg Glu Gly Gly Glu Gln Ile Ile Asn Ser Val Asp
      165      170      175
Val Thr Cys Gly Leu Ser Leu Gly Glu Tyr Thr Ala Leu Ala Phe Ala
      180      185      190
Gly Ala Phe Ser Phe Glu Asp Gly Leu Lys Leu Val Lys Leu Arg Gly
      195      200      205
Glu Ala Met Gln Ala Ala Ala Asp Ala Ala Lys Ser Ala Met Val Ser
      210      215      220
Ile Ile Gly Leu Asp Ser Glu Lys Val Gln Gln Leu Cys Asp Ala Ala

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225 230 235 240

Asn Gln Glu Val Asp Glu Ala Asp Lys Val Gln Ile Ala Asn Tyr Leu  
245 250 255

Cys Pro Gly Asn Tyr Ala Val Ser Gly Gly Leu Lys Gly Ile Glu Val  
260 265 270

Val Glu Ala Lys Ala Lys Ser Phe Lys Ala Arg Met Thr Val Arg Leu  
275 280 285

Ala Val Ala Gly Ala Phe His Thr Ser Phe Met Glu Pro Ala Val Ser  
290 295 300

Arg Leu Glu Ala Ala Leu Ala Ala Thr Glu Ile Arg Ser Pro Arg Ile  
305 310 315 320

Pro Val Ile Ser Asn Val Asp Ala Gln Pro His Ala Asp Pro Asp Thr  
325 330 335

Ile Lys Lys Ile Leu Ala Arg Gln Val Thr Ser Pro Val Gln Trp Glu  
340 345 350

Thr Thr Val Lys Thr Leu Leu Ser Lys Gly Leu Lys Ser Ser Tyr Glu  
355 360 365

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370 375 380

Ser Ala Ser Phe Glu Asn Ile Ser Ala  
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<210> 1913

<211> 858

<212> DNA

<213> Arabidopsis thaliana

<400> 1913  
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aacaatctct ctgattatga aaagtcttct ccggaggatg agatccctaa gatagtcacc 180  
gccggagctg gagatggtga agataagaac gaaacggatg cgacggtgat tgtcgtgac 240  
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gctagtcatg ctcaagaata ctctctccga cgaaccaacc tcaaccgtcg ccgaagaaga 480
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<210> 1914

<211> 285

<212> PRT

<213> Arabidopsis thaliana

<400> 1914

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Met Ala Ala Val Ser Ser Ser Ser Glu Thr Gly Asp Cys Gly Val Thr
1          5          10

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Gly Lys Arg Asp Glu Ile Met Leu Phe Gly Val Arg Val Val Val Asp
20          25          30

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Pro Met Arg Lys Cys Val Ser Leu Asn Asn Leu Ser Asp Tyr Glu Lys
35          40          45

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```

Ser Ser Pro Glu Asp Glu Ile Pro Lys Ile Val Thr Ala Gly Ala Gly
50          55          60

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Asp Gly Glu Asp Lys Asn Glu Thr Asp Ala Thr Val Ile Val Ala Asp
65          70          75          80

```

```

Gly Tyr Ala Ser Ala Asn Asp Ala Val Gln Ile Ser Ser Ser Ser Gly
85          90          95

```

```

Gly Arg Lys Arg Gly Val Pro Trp Thr Glu Asn Glu His Lys Arg Phe
100         105         110

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Leu Ile Gly Leu Gln Lys Val Gly Lys Gly Asp Trp Lys Gly Ile Ser
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115 047-E2F-PCT.ST25.txt 125  
 Arg Asn Phe Val Lys Ser Arg Thr Pro Thr Gln Val Ala Ser His Ala  
 130 135 140  
 Gln Lys Tyr Phe Leu Arg Arg Thr Asn Leu Asn Arg Arg Arg Arg Arg  
 145 150 155 160  
 Ser Ser Leu Phe Asp Ile Thr Thr Glu Thr Val Thr Glu Met Ala Met  
 165 170 175  
 Glu Gln Asp Pro Thr Gln Glu Asn Ser Pro Leu Pro Glu Thr Asn Ile  
 180 185 190  
 Ser Ser Gly Gln Gln Ala Met Gln Val Phe Thr Asp Val Pro Thr Lys  
 195 200 205  
 Thr Glu Asn Ala Pro Glu Thr Phe His Leu Asn Asp Pro Tyr Leu Val  
 210 215 220  
 Pro Val Thr Phe Gln Ala Lys Pro Thr Phe Asn Leu Asn Thr Asp Ala  
 225 230 235 240  
 Ala Pro Leu Ser Leu Asn Leu Cys Leu Ala Ser Ser Phe Asn Leu Asn  
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<210> 1915

<211> 2244

<212> DNA

<213> Arabidopsis thaliana

<400> 1915  
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actattcgtt	atggcaccag	accggccttt	agagagatat	ttgagtcatt	gaatgggaaa	2100
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<210> 1916

<211> 747

<212> PRT

<213> Arabidopsis thaliana

<400> 1916

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Trp Ile Leu Lys Val Val Met Ser Val Ile Phe Val Thr Trp Val Val  
35 40 45

Phe Leu Met Met Tyr Pro Gly Ser Leu Gly Asp Gln Ile Leu Thr Asn  
50 55 60

Trp Arg Ala Ile Ser Ser Asn Thr Leu Phe Gly Leu Thr Gly Ser Met  
65 70 75 80

Phe Leu Ile Phe Ser Gly Pro Ile Leu Val Ile Ala Ile Leu Ala Ser  
85 90 95

Leu Tyr Leu Ile Ile Ser Gly Glu Glu Thr Val Phe Thr Lys Lys Lys  
100 105 110

Ile Thr Lys Phe Pro Arg Phe Arg Leu Trp Thr Phe Pro Val Leu Val  
115 120 125

Asp Gly Pro Phe Gly Val Val Ser Ala Ala Glu Phe Leu Gly Ile Met  
130 135 140

Val Phe Ser Val Phe Phe Leu Trp Ala Ile Tyr Ala Tyr Thr Leu Arg  
145 150 155 160

Asn Leu Asn Val Leu Asp Tyr Phe His Val Leu Pro Asn Asn Arg Ser  
165 170 175

Ile Phe Leu Leu Glu Leu Thr Gly Leu Arg Phe Gly Met Ile Gly Leu  
180 185 190

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Leu Cys Met Val Phe Leu Phe Leu Pro Ile Ser Arg Gly Ser Ile Leu  
 195 200 205  
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 210 215 220  
 Trp Leu Gly His Ile Thr Met Thr Phe Phe Ser Leu His Gly Leu Cys  
 225 230 235 240  
 Tyr Val Val Gly Trp Thr Ile Gln Gly Gln Leu Leu Glu Leu Leu Phe  
 245 250 255  
 Glu Trp Lys Ala Thr Gly Ile Ala Val Leu Pro Gly Val Ile Ser Leu  
 260 265 270  
 Val Ala Gly Leu Leu Met Trp Val Thr Ser Leu His Thr Val Arg Lys  
 275 280 285  
 Asn Tyr Phe Glu Leu Phe Phe Tyr Thr His Gln Leu Tyr Ile Val Phe  
 290 295 300  
 Val Val Phe Leu Ala Leu His Val Gly Asp Tyr Leu Phe Ser Ile Val  
 305 310 315 320  
 Ala Gly Gly Ile Phe Leu Phe Ile Leu Asp Arg Phe Leu Arg Phe Tyr  
 325 330 335  
 Gln Ser Arg Arg Thr Val Asp Val Ile Ser Ala Lys Ser Leu Pro Cys  
 340 345 350  
 Gly Thr Leu Glu Leu Val Leu Ser Lys Pro Pro Asn Met Arg Tyr Asn  
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 Ala Leu Ser Phe Ile Phe Leu Gln Val Lys Glu Leu Ser Trp Leu Gln  
 370 375 380  
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 385 390 395 400  
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 405 410 415  
 Asp Gln Leu Ser Thr Leu Tyr Glu Ala Glu Asn Gln Asp Gln Leu Ile  
 420 425 430  
 Ser Pro Glu Ser Tyr Pro Lys Ile Thr Thr Cys Val Glu Gly Pro Tyr  
 2815

435

440

445

Gly His Glu Ser Pro Tyr His Leu Ala Tyr Glu Asn Leu Val Leu Val  
 450 455  
 Ala Gly Gly Ile Gly Ile Thr Pro Phe Phe Ala Ile Leu Ser Asp Ile  
 465 470 475 480  
 Leu His Arg Lys Arg Asp Gly Lys Asp Cys Leu Pro Gly Lys Val Leu  
 485 490 495  
 Val Val Trp Ala Ile Lys Asn Ser Asp Glu Leu Ser Leu Leu Ser Ala  
 500 505 510  
 Ile Asp Ile Pro Ser Ile Cys His Phe Phe Ser Lys Lys Leu Asn Leu  
 515 520 525  
 Glu Ile His Ile Tyr Val Thr Arg Gln Ser Glu Pro Cys Leu Glu Asp  
 530 535 540  
 Gly Met Val His Lys Val Val His Pro Ser Val Lys Thr Pro Trp Thr  
 545 550 555 560  
 Asn Gly Cys Ser Met Ser Val Leu Val Gly Thr Gly Asp Asn Ile Trp  
 565 570 575  
 Ser Gly Leu Tyr Leu Ile Ile Ser Thr Ile Gly Phe Ile Ala Met Ile  
 580 585 590  
 Thr Leu Val Asp Ile Phe Tyr Ile Asn Lys Tyr Asn Ile Thr Thr Trp  
 595 600 605  
 Trp Tyr Lys Gly Leu Leu Phe Val Val Cys Met Val Ala Ser Val Leu  
 610 615 620  
 Ile Phe Gly Gly Leu Val Val Val Phe Trp His Arg Trp Glu His Lys  
 625 630 635 640  
 Thr Gly Glu Val Glu Ala Asn Gly Asn Asp Lys Val Asp Leu Asn Gly  
 645 650 655  
 Glu Glu Thr His Asn Pro Ser Ala Ala Glu Leu Lys Gly Leu Ala Ile  
 660 665 670  
 Glu Glu Asp Val Gln Asn Tyr Thr Thr Ile Arg Tyr Gly Thr Arg Pro  
 675 680 685

Ala Phe Arg Glu Ile Phe Glu Ser Leu Asn Gly Lys Trp Gly Ser Val  
 690 695 700

Asp Val Gly Val Ile Val Cys Gly Pro Ala Thr Leu Gln Thr Thr Val  
 705 710 715 720

Ala Lys Glu Ile Arg Ser His Ser Ile Trp Arg Ser Ala Asn His Pro  
 725 730 735

Leu Phe His Phe Asn Ser His Ser Phe Asp Leu  
 740 745

<210> 1917

<211> 492

<212> DNA

<213> Arabidopsis thaliana

<400> 1917  
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 aacagatcaa aagtcgtttg ttcttcttca tcttctgtaa tggatccgta taagactctt 180  
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 gagccgttcg atgtatacga cgaggggattg aacggaatga atgatccaga ttgcgacacg 420  
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<210> 1918

<211> 163

<212> PRT

<213> Arabidopsis thaliana

<400> 1918

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 Page 2817

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35 40  
Ser Ser Ser Ser Val Met Asp Pro Tyr Lys Thr Leu Lys Ile Arg Pro  
50 55 60  
Asp Ser Ser Glu Tyr Glu Val Lys Lys Ala Phe Arg Gln Leu Ala Lys  
65 70 75 80  
Lys Tyr His Pro Asp Val Cys Arg Gly Ser Asn Cys Gly Val Gln Phe  
85 90 95  
Gln Thr Ile Asn Glu Ala Tyr Asp Ile Val Leu Lys Gln Ile Lys Asn  
100 105 110  
Gln Met Glu Gly Thr Glu Glu Phe Glu Pro Phe Asp Val Tyr Asp Glu  
115 120 125  
Gly Leu Asn Gly Met Asn Asp Pro Asp Cys Asp Thr Trp Glu Glu Trp  
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Met Gly Trp Glu Gly Ala Gly Thr Arg Asp Tyr Ser Ser His Val Asn  
145 150 155 160  
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&lt;210&gt; 1919

&lt;211&gt; 441

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1919

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cgtagaggag gaaacagagc agcatcagtt tccataagaa gtgagcaaag tacagaagga 240  
agcagtgggt tggatatatg gcttggtcgt ggcgccatgg ttggttttgc agttgccatt 300  
actgttgaga ttccactagg aaaaggactt cttgagaatt ttggagtagc aagtccattg 360  
cctacgggtg ctttagctgt tacagcattg gttggtgttc tagctgcggt ttcatcttc 420



caatcttctt ctaaaaactg a

&lt;210&gt; 1920

&lt;211&gt; 146

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1920

Met Ala Leu Ser Gln Val Ser Ala Ser Leu Ala Phe Ser Leu Pro Asn  
1 5 10 15Ser Gly Ala Leu Lys Leu Ala Thr Ile Thr Asn Pro Thr Ser Thr Cys  
20 25 30Arg Val His Val Pro Gln Leu Ala Gly Ile Arg Ser Thr Phe Ala Ser  
35 40 45Gly Ser Pro Leu Leu Pro Leu Lys Leu Ser Met Thr Arg Arg Gly Gly  
50 55 60Asn Arg Ala Ala Ser Val Ser Ile Arg Ser Glu Gln Ser Thr Glu Gly  
65 70 75 80Ser Ser Gly Leu Asp Ile Trp Leu Gly Arg Gly Ala Met Val Gly Phe  
85 90 95Ala Val Ala Ile Thr Val Glu Ile Ser Thr Gly Lys Gly Leu Leu Glu  
100 105 110Asn Phe Gly Val Ala Ser Pro Leu Pro Thr Val Ala Leu Ala Val Thr  
115 120 125Ala Leu Val Gly Val Leu Ala Ala Val Phe Ile Phe Gln Ser Ser Ser  
130 135 140Lys Asn  
145

&lt;210&gt; 1921

&lt;211&gt; 1212

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

<400> 1921  
 atggcgctctc tgcgaactctg cgacgggttat cttctcttca agccctctgt ttctcctcga 60  
 ttctctcttc aacgcatttc tcattcgcta atccctaag cctcatcttc tcctcctcca 120  
 tctccatcac catcatcgtc ctcttcatcc ttattcttca gtcggcgga gcttctgtac 180  
 caatcggcag ctgtatcact ctgcgtttct tccattgttg gaccagcgag agctgatgaa 240  
 cagttatccg aatgggaaag agtgtttctc ccaatcgatc ccggtgttgt tcttctcgac 300  
 attgcttttg tccccgacga acctagccga gggtttttac ttggaacgag acagactttg 360  
 ttagagacta aagatgggtg aagcacttgg aatccacgtt cgattccttc agctgaagaa 420  
 gaagatttca attatagatt caattcgatt agctttaaag gcaaagaagg atggattatt 480  
 ggcaaacctg cgattttatt gtacactgct gatgctggag agaattggga taggattcct 540  
 ctaagtcttc agcttccttg agatatggtg ttataaaaag cgacagaaga taagagtgc 600  
 gagatgggta ctgatgaagg tgctatttat gttacttcaa acaggggata taactggaaa 660  
 gctgctattc aggaaactgt ttcagctacc ttgaacagaa cagtatccag tggaaatcagt 720  
 ggtgctagtt actacacggg aactttcagt gctgttaatc gttcacctga tggaaatat 780  
 gtcgctgttt cgagccgtgg taacttcttt ctgacatggg agcctgggca gccttactgg 840  
 caaccacaca atagagctgt tgctagaaga attcagaaca tgggatggag agctgatggt 900  
 ggtctttggc ttcttggttc tggtggagga ctttatctta gcaaaggtag tgggattaca 960  
 gaggagtgtg aagaagtctc agtacaaagc cgtggctttg gcattctaga tgttggtat 1020  
 cgctcagagg aagaagcatg ggcagcagga ggcagtgga tactactgag aacaagaaat 1080  
 ggaggcaaat catggaaccg tgacaaagct gctgataata tcgcagctaa cctatacgca 1140  
 gtcaaatgtg tggatgacaa gaaaggattt gtgcttgga acgatggagt ctgtctccga 1200  
 tatgttggtc ga 1212

<210> 1922

<211> 403

<212> PRT

<213> Arabidopsis thaliana

<400> 1922

Met Ala Ser Leu Gln Leu Cys Asp Gly Tyr Leu Leu Phe Lys Pro Ser  
 1 5 10 15

Val Ser Pro Arg Phe Leu Ser Gln Arg Ile Ser His Arg Leu Ile Pro  
 20 25 30  
 Lys Ala Ser Ser Ser Pro Pro Pro Ser Pro Ser Pro Ser Ser Ser Ser  
 35 40 45  
 Ser Ser Leu Ser Phe Ser Arg Arg Glu Leu Leu Tyr Gln Ser Ala Ala  
 50 55 60  
 Val Ser Leu Ser Leu Ser Ser Ile Val Gly Pro Ala Arg Ala Asp Glu  
 65 70 75 80  
 Gln Leu Ser Glu Trp Glu Arg Val Phe Leu Pro Ile Asp Pro Gly Val  
 85 90 95  
 Val Leu Leu Asp Ile Ala Phe Val Pro Asp Glu Pro Ser Arg Gly Phe  
 100 105 110  
 Leu Leu Gly Thr Arg Gln Thr Leu Leu Glu Thr Lys Asp Gly Gly Ser  
 115 120 125  
 Thr Trp Asn Pro Arg Ser Ile Pro Ser Ala Glu Glu Glu Asp Phe Asn  
 130 135 140  
 Tyr Arg Phe Asn Ser Ile Ser Phe Lys Gly Lys Glu Gly Trp Ile Ile  
 145 150 155 160  
 Gly Lys Pro Ala Ile Leu Leu Tyr Thr Ala Asp Ala Gly Glu Asn Trp  
 165 170 175  
 Asp Arg Ile Pro Leu Ser Ser Gln Leu Pro Gly Asp Met Val Phe Ile  
 180 185 190  
 Lys Ala Thr Glu Asp Lys Ser Ala Glu Met Val Thr Asp Glu Gly Ala  
 195 200 205  
 Ile Tyr Val Thr Ser Asn Arg Gly Tyr Asn Trp Lys Ala Ala Ile Gln  
 210 215 220  
 Glu Thr Val Ser Ala Thr Leu Asn Arg Thr Val Ser Ser Gly Ile Ser  
 225 230 235 240  
 Gly Ala Ser Tyr Tyr Thr Gly Thr Phe Ser Ala Val Asn Arg Ser Pro  
 245 250 255  
 Asp Gly Arg Tyr Val Ala Val Ser Ser Arg Gly Asn Phe Phe Leu Thr  
 260 265 270

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Trp Glu Pro Gly Gln Pro Tyr Trp Gln Pro His Asn Arg Ala Val Ala  
 275 280 285  
 Arg Arg Ile Gln Asn Met Gly Trp Arg Ala Asp Gly Gly Leu Trp Leu  
 290 295 300  
 Leu Val Arg Gly Gly Gly Leu Tyr Leu Ser Lys Gly Thr Gly Ile Thr  
 305 310 315  
 Glu Glu Phe Glu Glu Val Pro Val Gln Ser Arg Gly Phe Gly Ile Leu  
 325 330 335  
 Asp Val Gly Tyr Arg Ser Glu Glu Glu Ala Trp Ala Ala Gly Gly Ser  
 340 345 350  
 Gly Ile Leu Leu Arg Thr Arg Asn Gly Gly Lys Ser Trp Asn Arg Asp  
 355 360 365  
 Lys Ala Ala Asp Asn Ile Ala Ala Asn Leu Tyr Ala Val Lys Phe Val  
 370 375 380  
 Asp Asp Lys Lys Gly Phe Val Leu Gly Asn Asp Gly Val Leu Leu Arg  
 385 390 395 400  
 Tyr Val Gly

<210> 1923

<211> 678

<212> DNA

<213> Arabidopsis thaliana

<400> 1923  
 atgagtttgg tcgccagttt gcaactcatc ctcccgcac ggccgagaag caccaagttg 60  
 ttgtgctcat tgcaaaagccc aaaacaagaa caagaactct ctctacttc tctccaatc 120  
 tctcttttac caaaactaat ctcttttgct ctgtctatct ctctaacttc cttttccctt 180  
 gccttagcca ttcttctct ctctcttct cagccactca ccactccttt cacccaatcc 240  
 aagttcgtcc agaccggtct tctcaatggc aaaattaggc ctgtcccttc caggaacca 300  
 ggatgtgtat cgacgaatcc aacctcatct tccttctctt ttccattgac gatcccagaa 360  
 accgatacac aggatcccat tgagaaactg aaagaagcaa taatgagcac ccagaagaac 420  
 cccaagtttg tggttcttga agatactccc tatgggaggt atgtggaggc agaggtagaa 480

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ggaggaggat ttagcagaga tgtgatggag tttttggtga agcaagatgt ggttgcttac 540  
 aggtgtatgg cactaaggt tacctttgtg taccctttca ccactgcttt tggagactcc 600  
 aagggacaag aagagaggtt gaagaagctc atcgatcagc ttggttggtg tgctcctacc 660  
 tttgaatcta tggaataa 678

<210> 1924

<211> 225

<212> PRT

<213> Arabidopsis thaliana

<400> 1924

Met Ser Leu Val Ala Ser Leu Gln Leu Ile Leu Pro Pro Arg Pro Arg  
 1 5 10 15

Ser Thr Lys Leu Leu Cys Ser Leu Gln Ser Pro Lys Gln Glu Gln Glu  
 20 25 30

Leu Ser Ser Thr Ser Pro Pro Ile Ser Leu Leu Pro Lys Leu Ile Ser  
 35 40 45

Phe Ala Leu Ala Ile Ser Leu Thr Ser Phe Ser Pro Ala Leu Ala Ile  
 50 55 60

Pro Ser Leu Ser Ser Ser Gln Pro Leu Thr Thr Pro Phe Thr Gln Ser  
 65 70 75 80

Lys Phe Val Gln Thr Gly Leu Leu Asn Gly Lys Ile Arg Pro Cys Pro  
 85 90 95

Ser Thr Asn Pro Gly Cys Val Ser Thr Asn Pro Thr Ser Ser Phe  
 100 105 110

Ser Phe Pro Leu Thr Ile Pro Glu Thr Asp Thr Gln Asp Pro Ile Glu  
 115 120 125

Lys Leu Lys Glu Ala Ile Met Ser Thr Gln Lys Asn Pro Lys Phe Val  
 130 135 140

Val Leu Glu Asp Thr Pro Tyr Gly Arg Tyr Val Glu Ala Glu Val Glu  
 145 150 155 160

Gly Gly Gly Phe Ser Arg Asp Val Met Glu Phe Leu Val Lys Gln Asp  
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Val Val Ala Tyr Arg Cys Met Ala Thr Lys Val Thr Phe Val Tyr Pro  
180 185 190

Phe Thr Thr Ala Phe Gly Asp Ser Lys Gly Gln Glu Glu Arg Leu Lys  
195 200 205

Lys Leu Ile Asp Gln Leu Gly Trp Tyr Ala Pro Thr Phe Glu Ser Met  
210 215 220

Glu  
225

<210> 1925

<211> 822

<212> DNA

<213> Arabidopsis thaliana

<400> 1925  
atgtcaatgg cgtctatagc ttcttcttct tccaccaccc tactctcttc ctctaggggt 60  
cttcttcctt ccaagtcttc tcttttatct cctaccgtct ctttcccag aatcataccc 120  
tcttctctcg catcctcttc ttctctctgt tccgggttct ccagtctcgg ttccctcacc 180  
accaaccgct ccgctctcac ccggaacttc gccgtcaagg ctcagggtga tgatttacca 240  
ctggtcggta ataaggcgcc tgattttgaa gctgaggcag tttttgatca agagttcata 300  
aaggtgaagc tctctgagta cattggcaaa aagtatgtta ttctattctt ctaccctttg 360  
gacttcactt ttgtctgccc cactgagatt actgccttca gtgaccgtta tgaagaattt 420  
gagaagctaa acaccgaagt attaggggtc tctgtcgaca gtgtgttctc gcatcttgcg 480  
tgggtccaac cagacagaaa gtcggggagg ctcggtgatc tgaattatcc tcttgtttcg 540  
gatatcacta aatccatttc aaaatcgttt ggagtgtcca tccctgatca gggcattgca 600  
ctgagagggc ttttcatcat agacaaggaa ggagtcattc agcattccac catcaacaac 660  
ctcgggtattg gccgaagtgt tgatgagaca atgagaacc tccaggcatt acagtatgtt 720  
caagaaaacc cggatgaagt gtgccctgcg ggatggaagc caggggagaa atcaatgaaa 780  
cctgaccca agctcagcaa agaatacttt tcagctatct ag 822

<210> 1926

<211> 273

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1926

Met Ser Met Ala Ser Ile Ala Ser Ser Ser Ser Thr Thr Leu Leu Ser  
1 5 10 15Ser Ser Arg Val Leu Leu Pro Ser Lys Ser Ser Leu Leu Ser Pro Thr  
20 25 30Val Ser Phe Pro Arg Ile Ile Pro Ser Ser Ser Ala Ser Ser Ser Ser  
35 40 45Leu Cys Ser Gly Phe Ser Ser Leu Gly Ser Leu Thr Thr Asn Arg Ser  
50 55 60Ala Ser Arg Arg Asn Phe Ala Val Lys Ala Gln Ala Asp Asp Leu Pro  
65 70 75 80Leu Val Gly Asn Lys Ala Pro Asp Phe Glu Ala Glu Ala Val Phe Asp  
85 90 95Gln Glu Phe Ile Lys Val Lys Leu Ser Glu Tyr Ile Gly Lys Lys Tyr  
100 105 110Val Ile Leu Phe Phe Tyr Pro Leu Asp Phe Thr Phe Val Cys Pro Thr  
115 120 125Glu Ile Thr Ala Phe Ser Asp Arg Tyr Glu Glu Phe Glu Lys Leu Asn  
130 135 140Thr Glu Val Leu Gly Val Ser Val Asp Ser Val Phe Ser His Leu Ala  
145 150 155 160Trp Val Gln Thr Asp Arg Lys Ser Gly Gly Leu Gly Asp Leu Asn Tyr  
165 170 175Pro Leu Val Ser Asp Ile Thr Lys Ser Ile Ser Lys Ser Phe Gly Val  
180 185 190Leu Ile Pro Asp Gln Gly Ile Ala Leu Arg Gly Leu Phe Ile Ile Asp  
195 200 205Lys Glu Gly Val Ile Gln His Ser Thr Ile Asn Asn Leu Gly Ile Gly  
210 215 220

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Arg Ser Val Asp Glu Thr Met Arg Thr Leu Gln Ala Leu Gln Tyr Val  
225 230 235 240

Gln Glu Asn Pro Asp Glu Val Cys Pro Ala Gly Trp Lys Pro Gly Glu  
245 250 255

Lys Ser Met Lys Pro Asp Pro Lys Leu Ser Lys Glu Tyr Phe Ser Ala  
260 265 270

Ile

<210> 1927

<211> 408

<212> DNA

<213> Arabidopsis thaliana

<400> 1927  
atggacatta ctgttcgaat ctccggctta aaatcctcca atctaaccg gataaccctt 60  
agattctcat ctctctctag attccgttgc tccaacaacg aacctcctcg aaagggaaac 120  
gagtccaacg gtgggtgtgg tgataaagcg tcgacggact gggacaaggc gtggaagaat 180  
ttcaagaagc agagcaagaa gtcattgttc tcgcaattca acgtggacaa gtacgtgact 240  
tggaatcctc ccagatcgga gtttgatttg tcggaagaag tcgatcctat aaaaagaaca 300  
gagagatcca atctcatgct ctggacaagt ccaagggtca cacttggttg agccatcgtc 360  
attgtctcat tcctctttct ctacaccatt cttgctcctg tcaagtga 408

<210> 1928

<211> 135

<212> PRT

<213> Arabidopsis thaliana

<400> 1928

Met Asp Ile Thr Val Arg Ile Ser Gly Leu Lys Ser Ser Asn Leu Ile  
1 5 10 15

Arg Ile Thr Pro Arg Phe Ser Ser Ser Arg Phe Arg Cys Ser Asn  
20 25 30



Asn Glu Pro Pro Arg Lys Gly Asn Glu Ser Asn Gly Gly Gly Gly Asp  
 35 40 45

Lys Ala Ser Thr Asp Trp Asp Lys Ala Trp Lys Asn Phe Lys Lys Gln  
 50 55 60

Ser Lys Lys Ser Leu Phe Ser Gln Phe Asn Val Asp Lys Tyr Val Thr  
 65 70 75 80

Trp Asn Pro Pro Arg Ser Glu Phe Asp Leu Ser Glu Glu Val Asp Pro  
 85 90 95

Ile Lys Arg Thr Glu Arg Ser Asn Leu Met Leu Trp Thr Ser Pro Arg  
 100 105 110

Phe Thr Leu Val Gly Ala Ile Val Ile Val Ser Phe Leu Leu Leu Tyr  
 115 120 125

Thr Ile Leu Ala Pro Val Lys  
 130 135

<210> 1929

<211> 369

<212> DNA

<213> Arabidopsis thaliana

<400> 1929

atgggtaaag caagaggagt gaacaatggc gtgaatgaaa gttctctcgg ttatcttttt	60
ggttccggcc agccttcttc cgctgctgct gccacaatgg ggactactac tactacaacc	120
accacaacta ccaccgatgg gaccggaggc agaccgataa ccaccacgac gaccacagtc	180
actgataaca agaagacatc tgcaggtggt agagggaagtc ctaataatta cttcagatca	240
gaaggccaaa actgtggaaa ctttctcagc gacaggccat ctactaaggt tcatgcagct	300
cctgggtggag gatcttctct tgattatctg ttggaggac caagtcctgc tggatctgga	360
aacaaatga	369

<210> 1930

<211> 122

<212> PRT

<213> Arabidopsis thaliana

&lt;400&gt; 1930

Met Gly Lys Ala Arg Gly Val Asn Asn Gly Val Asn Glu Ser Ser Leu  
1 5 10 15

Gly Tyr Leu Phe Gly Ser Gly Gln Pro Ser Ser Ala Ala Ala Ala Thr  
20 25 30

Met Gly Thr Thr Thr Thr Thr Thr Thr Thr Thr Thr Asp Gly Thr  
35 40 45

Gly Gly Arg Pro Ile Thr Thr Thr Thr Thr Val Thr Asp Asn Lys  
50 55 60

Lys Thr Ser Ala Gly Val Arg Gly Ser Pro Asn Asn Tyr Phe Arg Ser  
65 70 75 80

Glu Gly Gln Asn Cys Gly Asn Phe Leu Thr Asp Arg Pro Ser Thr Lys  
85 90 95

Val His Ala Ala Pro Gly Gly Gly Ser Ser Leu Asp Tyr Leu Phe Gly  
100 105 110

Gly Pro Ser Pro Ala Gly Ser Gly Asn Lys  
115 120

&lt;210&gt; 1931

&lt;211&gt; 1227

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1931

atgtctccat tgccttatag ttcttggcct ctgatactat tgtagtatt gtgggtcatg	60
gtagctagat tatcaaacgg agcttccaac aatgtaaagg ttggaatcat ttcaaaaggtg	120
gaagatgcta cgaatttcca tatctattat ggacagacct ttaaagtcac caaaacgcc	180
attgatggca agagctatct ccttattcag aacacttcta gaatggcggg tcggacaaag	240
tattgtactt ccaggataaa gtcttatgtg attccacttc taaattactc attagacact	300
caatcttctc aaggaagtgt tccggtttct ttctttgagt tacttggaatt actcgggaagc	360
ttgaaggga taacatcgga tgaggtagtt tcaccgtgtc ttctgaaact gtgtgaggca	420
ggggaagtag ttaagcttga caaaggtgaa caactatctc aattcgcggc gcatttcac	480
agcgatactg atcaacctca gacttgcaat ttgcaaaact tttttccact tagtgaagga	540

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acacctcttc agcgagcgga gtggatcaaa ttccttggag cgtttacaaa tcttgaaact	600
aaagccaatc aagtctatga ctcggttaaa gcaagctata cttgcttgtc tcaaatggct	660
gccacaaga caaatcctt caagccgatt gtagcctgga tgggatatga tcaaatgga	720
ggcatgtgga gttttactaa ggaatcacac aagctaaagt ttgtagaaga tgctggtggt	780
gaaaatatcg acaagtctat taacaaggtc tcttacaatg tctctgatcc tgatgatttg	840
gaagcactcc atgccatttt atgtactgtg gatgctgtga tcgatgaaac gctatcatct	900
gaccctcaaa actacacaca gacaacgttc ttggcgaaca taaacgtgga tgataactct	960
tgttttgcgt ttcttgctaa tcaaagcatc tggagatatg acaaagggt cagaaacaga	1020
acaactcttg actggtatga cggagcaatc tcgcaaccaa atcttgactt gctgacatt	1080
gttgaagcct tgtttccaac gggaaactat acaacttcgt acttcagaaa cattgctaag	1140
ggtgaaggag tcataaacat tagtccggat atgtgtgata gagacgcac attgccgtta	1200
gttccttcaa ttccagcttg tggatga	1227

<210> 1932

<211> 408

<212> PRT

<213> Arabidopsis thaliana

<400> 1932

Met	Ser	Pro	Leu	Pro	Tyr	Ser	Ser	Trp	Pro	Leu	Ile	Leu	Leu	Leu	Val
1			5						10					15	

Leu	Trp	Cys	Met	Val	Ala	Arg	Leu	Ser	Asn	Gly	Ala	Ser	Asn	Asn	Val
		20					25					30			

Lys	Val	Gly	Ile	Ile	Ser	Lys	Val	Glu	Asp	Ala	Thr	Asn	Phe	His	Ile
	35					40					45				

Tyr	Tyr	Gly	Gln	Thr	Phe	Lys	Val	Ile	Lys	Asn	Ala	Ile	Asp	Gly	Lys
	50					55				60					

Ser	Tyr	Leu	Leu	Ile	Gln	Asn	Thr	Ser	Arg	Met	Ala	Val	Arg	Thr	Lys
65				70						75				80	

Tyr	Cys	Thr	Ser	Arg	Ile	Lys	Ser	Tyr	Val	Ile	Pro	Leu	Leu	Asn	Tyr
			85						90					95	

Ser	Leu	Asp	Thr	Gln	Ser	Ser	Gln	Gly	Ser	Val	Pro	Val	Ser	Phe	Phe

Glu Leu Leu Gly Leu Leu Gly Ser Leu Lys Gly Ile Thr Ser Asp Glu  
 115 120  
 Val Val Ser Pro Cys Leu Leu Lys Leu Cys Glu Ala Gly Glu Val Val  
 130 135  
 Lys Leu Asp Lys Gly Glu Gln Leu Ser Gln Phe Ala Ala His Phe Ile  
 145 150 155  
 Ser Asp Thr Asp Gln Pro Gln Thr Cys Asn Phe Ala Asn Phe Phe Pro  
 165 170 175  
 Leu Ser Glu Gly Thr Pro Leu Gln Arg Ala Glu Trp Ile Lys Phe Leu  
 180 185  
 Gly Ala Phe Thr Asn Leu Glu Thr Lys Ala Asn Gln Val Tyr Asp Ser  
 195 200 205  
 Val Lys Ala Ser Tyr Thr Cys Leu Ser Gln Met Ala Ala Asn Lys Thr  
 210 215 220  
 Lys Ser Phe Lys Pro Ile Val Ala Trp Met Gly Tyr Asp Gln Asn Gly  
 225 230 235 240  
 Gly Met Trp Ser Phe Thr Lys Glu Ser His Lys Leu Lys Phe Val Glu  
 245 250 255  
 Asp Ala Gly Gly Glu Asn Ile Asp Lys Ser Ile Asn Lys Val Ser Tyr  
 260 265 270  
 Asn Val Ser Asp Pro Asp Asp Leu Glu Ala Leu His Ala Ile Leu Cys  
 275 280 285  
 Thr Val Asp Ala Val Ile Asp Glu Thr Leu Ser Ser Asp Pro Gln Asn  
 290 295 300  
 Tyr Thr Gln Thr Thr Phe Leu Ala Asn Ile Asn Val Asp Asp Asn Ser  
 305 310 315 320  
 Cys Phe Ala Phe Leu Ala Asn Gln Ser Ile Trp Arg Tyr Asp Lys Arg  
 325 330 335  
 Val Arg Asn Arg Thr Thr Leu Asp Trp Tyr Asp Gly Ala Ile Ser Gln  
 340 345 350

Pro Asn Leu Val Leu Ala Asp Ile Val Glu Ala Leu Phe Pro Thr Gly  
 355 360 365

Asn Tyr Thr Thr Ser Tyr Phe Arg Asn Ile Ala Lys Gly Glu Gly Val  
 370 375 380

Ile Asn Ile Ser Pro Asp Met Cys Asp Arg Asp Ala Ser Leu Pro Leu  
 385 390 395 400

Val Pro Ser Ile Pro Ala Cys Gly  
 405

<210> 1933

<211> 957

<212> DNA

<213> Arabidopsis thaliana

<400> 1933  
 atggcgacgg taccattgtt caccagttt ccctgcaaaa ccctaaatcc aagtcacatca 60  
 aacactaaac accaatcgaa atctccgatc ctactaccga ttaactcaat aaatcggcga 120  
 tcggagattg gagtctctgt tcatcggccg gatttcaaaa tccgagcgac ggacatcgac 180  
 gacgaatggg gtcaagatgg agtggagaga gtatttgcct catcttcaac cgtatcggta 240  
 gcagataaag caatcgaatc cgtggaggag acggagaggc taaagagatc actagcggat 300  
 tcgttgtacg gaacagatcg aggtttaagc gtatcgagtg atacgagagc tgagatcagc 360  
 gagctcatca cacagctcga gtctaagaac cctactccag ctccatacga agctctgttt 420  
 ctctcaacg gcaaatggat cctcgcttac acgtcgttcg tggggttggt cccattgctc 480  
 tcacgaagaa ttgaaccgtt gggttaagtg gatgagatct cacaacatc tgattccgat 540  
 agcttcaccg ttcaaaactc tgcccggttc gctggtccgt ttccacaac gtcgtttagc 600  
 accaacgcta agtttgaat ccgaagtcct aaacgtgtcc agattaagtt cgagcaaggt 660  
 gttatagggg ctctcagctg aacggattcg attgaaatc cggaatccgt ggaggttctt 720  
 ggtcagaaaa tcgatctcaa tccattataa gggttactta catcagtcga agacactgct 780  
 tcttcagtgg ctagaacctt tcaaaccaa ccaccattga agttttctct gcctagtgcg 840  
 aacacgcagt cgtggctgct cacaacttat ctgcacaagg accttcggat ctgcagaggc 900  
 gatggtggaa gcgtctatgt gtcctcaaaa gaaggaagct ctctcttaaa cccttaa 957

<210> 1934

<211> 318

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1934

Met Ala Thr Val Pro Leu Phe Thr Gln Phe Pro Cys Lys Thr Leu Asn  
1 5 10 15

Pro Ser Ser Ser Asn Thr Lys His Gln Ser Lys Ser Pro Ile Leu Leu  
20 25 30

Pro Ile Asn Ser Ile Asn Arg Arg Ser Glu Ile Gly Val Ser Val His  
35 40 45

Arg Pro Asp Phe Lys Ile Arg Ala Thr Asp Ile Asp Asp Glu Trp Gly  
50 55 60

Gln Asp Gly Val Glu Arg Val Phe Ala Ser Ser Ser Thr Val Ser Val  
65 70 75 80

Ala Asp Lys Ala Ile Glu Ser Val Glu Glu Thr Glu Arg Leu Lys Arg  
85 90 95

Ser Leu Ala Asp Ser Leu Tyr Gly Thr Asp Arg Gly Leu Ser Val Ser  
100 105 110

Ser Asp Thr Arg Ala Glu Ile Ser Glu Leu Ile Thr Gln Leu Glu Ser  
115 120 125

Lys Asn Pro Thr Pro Ala Pro Asn Glu Ala Leu Phe Leu Leu Asn Gly  
130 135 140

Lys Trp Ile Leu Ala Tyr Thr Ser Phe Val Gly Leu Phe Pro Leu Leu  
145 150 155 160

Ser Arg Arg Ile Glu Pro Leu Val Lys Val Asp Glu Ile Ser Gln Thr  
165 170 175

Ile Asp Ser Asp Ser Phe Thr Val Gln Asn Ser Val Arg Phe Ala Gly  
180 185 190

Pro Phe Ser Thr Thr Ser Phe Ser Thr Asn Ala Lys Phe Glu Ile Arg  
195 200 205

Ser Pro Lys Arg Val Gln Ile Lys Phe Glu Gln Gly Val Ile Gly Thr  
210 215 220

Pro Gln Leu Thr Asp Ser Ile Glu Ile Pro Glu Ser Val Glu Val Leu  
225 230 235 240

Gly Gln Lys Ile Asp Leu Asn Pro Ile Lys Gly Leu Leu Thr Ser Val  
245 250 255

Gln Asp Thr Ala Ser Ser Val Ala Arg Thr Ile Ser Asn Gln Pro Pro  
260 265 270

Leu Lys Phe Ser Leu Pro Ser Asp Asn Thr Gln Ser Trp Leu Leu Thr  
275 280 285

Thr Tyr Leu Asp Lys Asp Leu Arg Ile Ser Arg Gly Asp Gly Gly Ser  
290 295 300

Val Tyr Val Leu Ile Lys Glu Gly Ser Ser Leu Leu Asn Pro  
305 310 315

<210> 1935

<211> 1791

<212> DNA

<213> Arabidopsis thaliana

<400> 1935  
atggagggtt cgcttccact caagctctca tcgtcggtat ctccctccat catcaaactt 60  
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tttcttcaac ttgatgataa aagccgacgt cttcgtgacc aacaagtttc acattctctc 180  
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&lt;210&gt; 1936

&lt;211&gt; 596

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1936

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Ile Ile Lys Leu Gln Gly Ser Ser Ser Ser Ile Asp Ile Lys Phe Ser
20          25          30

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Lys Tyr Thr Ser Leu Pro Lys Pro Phe Leu Gln Leu Asp Asp Lys Ser
35          40          45

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Arg Arg Leu Arg Asp Gln Gln Val Ser His Ser Leu Glu Leu Arg Ser
50          55          60

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047-E2F-PCT.ST25.txt

Tyr Arg Lys Arg Val Thr Ala Lys Ser Gly Ser Gln Gly Trp Asp Phe  
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 100 105 110  
 Glu Glu Pro Val Ala Glu Met Gly Thr Ser Gly Ile Ile Leu Val Ala  
 115 120 125  
 Gly Ala Thr Gly Gly Val Gly Arg Arg Ile Val Asp Ile Leu Arg Lys  
 130 135 140  
 Arg Gly Leu Pro Val Lys Ala Leu Val Arg Asn Glu Glu Lys Ala Arg  
 145 150 155 160  
 Lys Met Leu Gly Pro Glu Ile Asp Leu Ile Val Ala Asp Ile Thr Lys  
 165 170 175  
 Glu Asn Thr Leu Val Pro Glu Lys Phe Lys Gly Val Arg Lys Val Ile  
 180 185 190  
 Asn Ala Val Ser Val Ile Val Gly Pro Lys Glu Gly Asp Thr Pro Glu  
 195 200 205  
 Arg Gln Lys Tyr Asn Gln Gly Val Arg Phe Phe Glu Pro Glu Ile Lys  
 210 215 220  
 Gly Asp Ser Pro Glu Leu Val Glu Tyr Ile Gly Met Lys Asn Leu Ile  
 225 230 235 240  
 Asn Ala Val Arg Asp Gly Val Gly Leu Glu Asn Gly Lys Leu Ile Phe  
 245 250 255  
 Gly Val Gly Asp Asn Thr Phe Lys Asp Leu Pro Trp Gly Ala Leu Asp  
 260 265 270  
 Asp Val Val Met Gly Gly Val Ser Glu Ser Asn Phe Ile Val Asp Leu  
 275 280 285  
 Thr Ala Gly Glu Asn Gly Gly Pro Thr Gly Ile Phe Lys Gly Ile Val  
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 Ser Thr Thr Asn Asn Gly Gly Phe Thr Ser Val Arg Thr Lys Asn Phe  
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047-E2F-PCT.ST25.txt

Pro Glu Ala Glu Asn Val Ser Ala Tyr Asp Gly Leu Glu Leu Arg Leu  
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Lys Gly Asp Gly Leu Arg Tyr Lys Leu Ile Val Arg Thr Ser Gln Asp  
340 345 350

Trp Asp Thr Val Gly Tyr Thr Ala Ser Phe Asp Thr Ser Pro Gly Gln  
355 360 365

Trp Gln Ser Val Arg Leu Pro Phe Ser Ser Leu Arg Pro Val Phe Arg  
370 375 380

Ala Arg Thr Val Thr Asp Ala Pro Pro Phe Asn Ala Ser Ser Ile Ile  
385 390 395 400

Ser Leu Gln Leu Met Phe Ser Lys Phe Glu Tyr Asp Gly Lys Leu Asn  
405 410 415

Pro Thr Phe Lys Glu Gly Pro Phe Glu Leu Pro Leu Ser Ser Ile Arg  
420 425 430

Ala Tyr Ile Gln Asp Pro Val Thr Pro Arg Phe Val His Val Gly Ser  
435 440 445

Ala Gly Val Thr Arg Pro Glu Arg Pro Gly Leu Asp Leu Ser Lys Gln  
450 455 460

Pro Pro Ala Val Arg Leu Asn Lys Glu Leu Asp Phe Ile Leu Thr Tyr  
465 470 475 480

Lys Leu Lys Gly Glu Asp Leu Ile Arg Asp Ser Gly Ile Pro Phe Ala  
485 490 495

Ile Val Arg Pro Cys Ala Leu Thr Glu Glu Pro Ala Gly Ala Asp Leu  
500 505 510

Ile Phe Glu Gln Gly Asp Asn Ile Thr Gly Lys Val Ser Arg Asp Glu  
515 520 525

Val Ala Arg Ile Cys Ile Ala Ala Leu Glu Ser Pro Tyr Ala Leu Asn  
530 535 540

Lys Thr Phe Glu Val Lys Ser Thr Val Pro Phe Ser Glu Pro Phe Thr  
545 550 555 560

Val Asp Pro Glu Asn Pro Pro Pro Glu Lys Asp Tyr Asn Glu Tyr Phe  
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Lys Thr Leu Lys Asp Gly Ile Thr Gly Lys Glu Ala Leu Glu Gln Ser  
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Thr Val Ala Val  
 595

<210> 1937

<211> 3066

<212> DNA

<213> Arabidopsis thaliana

<400> 1937

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ttatctcgag ttgcccaaga tcttaaatct tcaactcctg attctgtttc taaacagatt	660
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&lt;210&gt; 1938

&lt;211&gt; 1021

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1938

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Thr Gln Glu Glu Ile Lys Ser Ser Gly Asn Pro Thr Leu Asp Lys Leu  
35 40 45

Glu Asn Thr Ser Arg Thr Val Lys Gly Ala Gln Val Ile Gly Glu Asn  
50 55 60

Asp Lys Ala Leu Asp Leu Val Leu Leu Ser Leu Glu Arg Phe Ser Lys  
65 70 75 80

Ser Pro Asp Ser Lys Arg Asp Lys Asp Val Ala Cys Ser Val Gln Ser  
85 90 95

Leu Arg Ile Ile Ser Asn Leu Val Ala Thr Arg Ala Ile Val Ser Val  
100 105 110

Gly Leu Ile Glu Lys Ile Thr Cys Ala Leu Leu Asp Phe Thr Asp Ala  
115 120 125

Leu Val Gly Met Lys Ser Pro Glu Phe Asn Asn Ile Ile Pro Lys Ser  
130 135 140

Leu Ser Val Thr Lys Asn Leu Val Gly His Val Glu Gly Asn Asn Ile  
145 150 155 160

His Ser Ser Tyr Ile Arg His Trp Thr Lys Val Val Glu Ile Phe Ile  
165 170 175

Gln Val Val Arg Trp Glu Glu Glu Gly Thr Gly Arg Ile Ile Tyr Glu  
180 185 190

Ala Cys Ser Cys Ile Thr Thr Met Leu Ser Arg Val Ala Gln Asp Leu  
195 200 205

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Lys Ser Ser Thr Pro Asp Ser Val Ser Lys Gln Ile Leu Glu His Ala  
 210 215 220  
 Asn Met Ser Arg Ile Val Asp His Leu Cys Leu Cys Leu Ala Ser Ser  
 225 230 235 240  
 Gly Ser Ser Leu Thr Ser Gly Ser Ser Gln Met Leu Ala Ala Ala Cys  
 245 250 255  
 Glu Ala Cys Arg Ala Ile Trp Ile Leu Ile Asp Thr Ser Glu Thr Phe  
 260 265 270  
 Phe Lys Asn Asp Asp Val Asn Ile Leu Pro Leu Asp Ala Leu Gln Asn  
 275 280 285  
 Arg Leu Ser Gln His Asp Ile Gly Asn Ser Glu Trp Gly Pro Leu Ser  
 290 295 300  
 Glu Lys Leu Val Asp Thr Val Thr Arg Ala Tyr Leu Arg Ser Lys His  
 305 310 315 320  
 Val Gln Val Ala Val Gly His Cys Leu His Gln Arg Val Glu Ala Pro  
 325 330 335  
 Leu Val Ser Ala Ile Gln Leu Leu Ser Arg Cys Cys Leu His Asn Gly  
 340 345 350  
 Ile Leu Pro Ser Met Leu Cys Gly Leu Pro Ser Ser Leu Pro Ile Thr  
 355 360 365  
 Thr Val Val Ser Gly Gly Glu Asp Gly Thr Val Ile Ser Glu Ile Phe  
 370 375 380  
 Ser Ile Leu Ser Tyr Ala Thr Leu Ser Ser Lys Asp Gln Gln Thr Gly  
 385 390 395 400  
 Glu Lys Asp Asn Phe Glu Gly Arg Leu Asn Asn Leu Val Phe His Ser  
 405 410 415  
 Cys Leu Met Leu Ala Thr Val Ala Gln Cys Leu Lys Leu Thr Gly Arg  
 420 425 430  
 Asn Ser Val Leu Leu Met Leu Thr Thr Ser Pro Lys Lys His Gln His  
 435 440 445  
 Arg Leu Ser Ala Ile Ala Asn His Ile Ala Ser Asp Asp Lys Ile Glu  
 450 455 460

047-E2F-PCT.ST25.txt

Ala Ser Leu Gln Asn His Ser Ala Ser Ala Met Leu Ala Leu Ala Ser  
465 470 475 480

Ile Leu Ala Leu Glu Lys Gly Ser Ser Ala Gly Ser Ser Val Ser Glu  
485 490 495

Leu Val Val Ser Leu Ile Pro Arg Ala Thr Lys Leu Cys Tyr His Leu  
500 505 510

Arg Pro Met Pro Ser Asn Glu Gly Glu Val Ile Ser His Ser Ala Asn  
515 520 525

Tyr Ala Lys Trp His Gly Leu Leu Asp Gly Cys Ile Gly Leu Leu Glu  
530 535 540

Ser Arg Leu Lys Trp Gly Gly Pro Leu Ala Val Gln Gln Leu Ile Ala  
545 550 555 560

Ser Gly Thr Pro Leu Leu Leu Ile Asn Leu Leu Ala Gly Lys Leu Ser  
565 570 575

Asn Ala Ser Pro Glu Asp Ile Lys Lys Thr Ser Asn Arg Ile Gly Leu  
580 585 590

Ser Pro Ile Gly Val Val Trp Thr Ile Ser Ser Ile Cys His Cys Leu  
595 600 605

Ser Gly Gly Thr Thr Phe Arg Gln Val Leu Val Lys Ile Glu Thr Met  
610 615 620

Lys Leu Ile Thr Cys Leu Leu Ser Asp Ala His Ile Lys Leu Val Lys  
625 630 635 640

Ser Trp Gly Gly Pro Gly Gly Gly Lys Asp Gly Val Arg Glu Thr Ile  
645 650 655

Asn Val Ile Ile Asp Leu Leu Ala Phe Pro Phe Val Ala Leu Gln Ser  
660 665 670

Gln Pro Gly Ser Leu Ser Ala Thr Ala Ser Val Asn Ser Gly Phe Ile  
675 680 685

Leu Asn Ile Gly Ser Pro Gly Val Arg Val Cys Met Glu Asp Arg Asp  
690 695 700

Leu Leu Lys Ala Ile Glu Glu Asp Met Asp Lys Tyr Ile Ile Val Leu  
Page 2841

705 710 720  
 Leu Glu Val Gly Val Pro Ser Leu Ile Leu Arg Cys Leu Asp His Leu  
 725 730 735  
 Glu Leu Lys Asp Leu Val Arg Pro Val Ala Phe Leu Ala Lys Met Val  
 740 745 750  
 Gly Arg Pro Arg Leu Ala Val Asp Leu Val Ser Lys Gly Leu Leu Asp  
 755 760 765  
 Pro Asn Arg Met Lys Lys Leu Leu Asn Gln Ser Ser Pro Arg Glu Val  
 770 775 780  
 Ile Leu Asp Ile Leu Met Ile Ile Ser Asp Leu Ser Arg Met Asp Lys  
 785 790 795 800  
 Ala Phe Tyr Lys Tyr Ile Gly Glu Ala Ser Val Leu Gln Pro Leu Lys  
 805 810 815  
 Glu Tyr Leu Thr His Val Asp Pro Asn Ile Arg Ala Lys Ala Cys Ser  
 820 825 830  
 Ala Leu Gly Asn Met Cys Arg His Asn Gly Tyr Phe Tyr Ser Ala Leu  
 835 840 845  
 Ala Glu His Gln Ile Ile Gly Leu Leu Ile Asp Arg Cys Ala Asp Pro  
 850 855 860  
 Asp Lys Arg Thr Gln Lys Phe Ala Cys Phe Ala Ile Gly Asn Ala Ala  
 865 870 875 880  
 Tyr His Asn Asp Thr Leu Tyr Glu Glu Leu Arg Arg Ser Ile Thr Gln  
 885 890 895  
 Leu Ala Asn Val Leu Thr Thr Ala Glu Glu Asp Lys Thr Lys Ala Asn  
 900 905 910  
 Ala Ala Gly Ala Leu Ser Asn Leu Val Arg Asn Ser Asn Lys Leu Cys  
 915 920 925  
 Glu Asp Ile Val Ser Lys Gly Ala Leu Gln Thr Leu Leu Arg Leu Val  
 930 935 940  
 Ala Asp Cys Ser Thr Leu Ala Leu Asn Pro Ser Lys Lys Glu Thr Ala  
 945 950 955 960



Ser Glu Ser Pro Leu Lys Ile Ala Leu Phe Ser Leu Ala Lys Met Cys  
 965 970 975

Ser Asn His Gln Ile Cys Arg Gln Phe Val Lys Ser Ser Glu Leu Phe  
 980 985 990

Pro Val Ile Ala Arg Leu Lys Gln Ser Pro Glu Ala Asn Ile Ala His  
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<211> 792

<212> DNA

<213> Arabidopsis thaliana

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<210> 1940

<211> 263

<212> PRT

<213> Arabidopsis thaliana

&lt;400&gt; 1940

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His Cys Ser Pro Ser Leu Phe Ser Pro Lys Phe Arg Phe Phe Thr  
35 40 45

Ser Lys Met Met Met Thr Pro Phe Asp Ser Asp Phe Ser Leu Val Ser  
50 55 60

Pro Thr Ser Ile Leu Glu Ala Asn Pro Ser Ile Phe Ser Ser Lys Asn  
65 70 75 80

Pro Lys Pro Val Ser Tyr Phe Glu Pro Thr Ile Pro Asn Pro Gln Arg  
85 90 95

Phe His Ser Pro Asp Val Phe Gly Leu Ala Asp Leu Val Lys Asp Gly  
100 105 110

Asp Ser Asn Arg Asp His Ser Arg Lys Pro Val Asn Lys Met Val Leu  
115 120 125

Phe Gly Ser Lys Leu Arg Val Gln Ile Pro Ser Ser Ala Asp Phe Gly  
130 135 140

Thr Lys Thr Gly Ile Arg Tyr Pro Pro Cys Gln Leu Ser Pro Cys Val  
145 150 155 160

Gln Thr Lys Val Leu Ala Val Ser Glu Ile Asp Gln Thr Glu Asp Tyr  
165 170 175

Thr Arg Val Ile Ser His Gly Pro Asn Pro Thr Ile Thr His Ile Phe  
180 185 190

Asp Asn Ser Val Phe Val Glu Ala Thr Pro Cys Ser Val Pro Leu Pro  
195 200 205

Gln Pro Ala Met Glu Thr Lys Ser Thr Glu Ser Phe Leu Ser Arg Cys  
210 215 220

Phe Thr Cys Lys Lys Asn Leu Asp Gln Lys Gln Asp Ile Tyr Ile Tyr  
225 230 235 240

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Arg Gly Glu Lys Gly Phe Cys Ser Ser Glu Cys Arg Tyr Gln Glu Met  
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Leu Leu Asp Gln Met Glu Thr  
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<210> 1941

<211> 942

<212> DNA

<213> Arabidopsis thaliana

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tcattggatt tccaagtttc tgggtgtcaaa tggagggttg ttatacgctt atctagggga 180  
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tcacacacgg atttgaagga gaggtttctt gtgaacgaca aagcggggtt ctatgccgag 420  
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tataaattga gagtggttga ccaactcaat cgcaactcact gtgaaactga gtgtagatat 780  
tggtttcctt ataaccctgt taatcaaatg gattccttat ggggacgtcc caagtgtttg 840  
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<210> 1942

<211> 313

<212> PRT

<213> Arabidopsis thaliana

&lt;400&gt; 1942

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20     25
Thr Glu Lys Val Lys Asn Cys Gln Ser Leu Asp Phe Gln Val Ser Gly
35     40     45
Val Lys Trp Arg Leu Val Ile Arg Leu Ser Arg Gly Arg Lys Asp His
50     55     60
Leu Ser Phe Val Leu Glu Ile Thr Asp Glu Lys Cys Thr Gly Ser Thr
65     70     75     80
Trp Asp Val Lys Phe Asn Phe Lys Ile Gly Ile Val Pro Gln Thr Gly
85     90     95
Pro Asp Tyr Cys Phe Val Leu Val Gly His Gln Asn Glu Lys Lys Arg
100    105    110
Ser Gln Gly Leu Ala Asn Phe Ile Ser His Thr Asp Leu Lys Glu Arg
115    120    125
Phe Leu Val Asn Asp Lys Ala Gly Phe Tyr Ala Glu Ile Ser Asp Val
130    135    140
Gln Pro Asn Phe Pro Val Thr Arg Ile Pro Arg Thr Met Gly Thr Ala
145    150    155    160
Glu Arg Phe Lys Leu Ile Glu Phe Ser Pro Lys Asn Ser Arg Phe Thr
165    170    175
Trp Lys Ile Thr Gln Phe Ser Ser Phe Asp Gly Glu Glu His Ser Ser
180    185    190
Tyr Glu Phe Thr Val Gly Pro Arg Arg Trp Lys Leu Val Met Tyr Pro
195    200    205
Lys Gly Asn Gly Asp Gly Lys Gly Asn Ser Leu Ser Leu Tyr Leu Phe
210    215    220
Ala Ser Asp Tyr Val Thr Asn Gly Pro Lys Gly Gly Thr Leu Ala Ile
225    230    235    240

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Tyr Lys Leu Arg Val<sub>245</sub> Leu Asp Gln Leu Asn<sub>250</sub> Arg Asn His Cys Glu Thr<sub>255</sub>

Glu Cys Arg Tyr Trp Phe Pro Tyr Asn<sub>265</sub> Pro Val Asn Gln Met<sub>270</sub> Asp Ser

Leu Trp Gly<sub>275</sub> Arg Pro Lys Phe Leu<sub>280</sub> Pro Leu Glu Glu<sub>285</sub> Leu His Lys Ser

Ser Arg Gly Phe Leu Val Asn<sub>295</sub> Asp Gln Ile Tyr Ile<sub>300</sub> Gly Val Glu Ile

Ser Ile Val Ser Thr Thr<sub>310</sub> Glu Tyr Leu

<210> 1943

<211> 1569

<212> DNA

<213> Arabidopsis thaliana

<400> 1943  
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 aagaagctca acttgcttca gcttccaaac attcgtcttc gatcttctac taacttctct 180  
 cagaagagaa ttttaatgtc tctaataagt gtagctgggg agagtaagggt acaagaactt 240  
 gagactgaga aaagggatcc aaggacagtt gcttccatta ttcttgaggg tggagcagga 300  
 actcgaactt ttctctcacc aaaacgccgc gccaaagcctg ccgttcttat cgggggagcc 360  
 tataggttga tagatgtacc aatgagcaat tgtattaaca gcggaatcaa caaagtctac 420  
 atactcacac aatataactc agcatcattg aacaggcatt tagcccgctg ttacaactcc 480  
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 gaatctggta aaaggtggtt ccaaggtaca gcagatgcgg ttcggaatt ccattgctt 600  
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 gacaaaggaa gaggttatctc attcagtgaa aaacctaag gagacgacct gaaagcaatg 840  
 gcagtagaca caactatctt aggactttcc aaggaggaag ctgaaaagaa accatacata 900  
 gcttcaatgg gaggttatgt tttcaaaaaa gaaatactgt taaatctctt gagatggcgt 960

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gaggcgaatc ttgcactcac tgagcatcct ggggcattta gtttctacga cgcggcaaaa 1140
ccaatatata catcaaggag aaacctgccca ccatcaaaaa tagacaactc taagctcatc 1200
gattcaatca tttctcatgg aagcttctta accaactgct tgattgagca tagcattgtg 1260
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aagaatgtaa tcatcgcaaa ctcgaggaga atacaagaag cagataggtc atccgatgga 1500
ttttacatca gatctggcat tactgtaatc ttgaagaact cagtaattaa agatggagtt 1560
gtgatatga 1569

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&lt;210&gt; 1944

&lt;211&gt; 522

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1944

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Met Val Val Ser Ala Asp Cys Arg Ile Ser Leu Ser Ala Pro Ser Cys
1      5      10      15

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Ile Arg Ser Ser Thr Gly Leu Thr Arg His Ile Lys Leu Gly Ser
20      25      30

```

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Phe Cys Asn Gly Glu Leu Met Gly Lys Lys Leu Asn Leu Ser Gln Leu
35      40      45

```

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Pro Asn Ile Arg Leu Arg Ser Ser Thr Asn Phe Ser Gln Lys Arg Ile
50      55      60

```

```

Leu Met Ser Leu Asn Ser Val Ala Gly Glu Ser Lys Val Gln Glu Leu
65      70      75      80

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```

Glu Thr Glu Lys Arg Asp Pro Arg Thr Val Ala Ser Ile Ile Leu Gly
85      90      95

```

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Gly Gly Ala Gly Thr Arg Leu Phe Pro Leu Thr Lys Arg Arg Ala Lys
100     105     110

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Pro Ala Val Pro Ile Gly Gly Ala Tyr Arg Leu Ile Asp Val Pro Met  
 115 120 125  
 Ser Asn Cys Ile Asn Ser Gly Ile Asn Lys Val Tyr Ile Leu Thr Gln  
 130 135 140  
 Tyr Asn Ser Ala Ser Leu Asn Arg His Leu Ala Arg Ala Tyr Asn Ser  
 145 150 155 160  
 Asn Gly Leu Gly Phe Gly Asp Gly Tyr Val Glu Val Leu Ala Ala Thr  
 165 170 175  
 Gln Thr Pro Gly Glu Ser Gly Lys Arg Trp Phe Gln Gly Thr Ala Asp  
 180 185 190  
 Ala Val Arg Gln Phe His Trp Leu Phe Glu Asp Ala Arg Ser Lys Asp  
 195 200 205  
 Ile Glu Asp Val Leu Ile Leu Ser Gly Asp His Leu Tyr Arg Met Asp  
 210 215 220  
 Tyr Met Asp Phe Ile Gln Asp His Arg Gln Ser Gly Ala Asp Ile Ser  
 225 230 235 240  
 Ile Ser Cys Ile Pro Ile Asp Asp Arg Arg Ala Ser Asp Phe Gly Leu  
 245 250 255  
 Met Lys Ile Asp Asp Lys Gly Arg Val Ile Ser Phe Ser Glu Lys Pro  
 260 265 270  
 Lys Gly Asp Asp Leu Lys Ala Met Ala Val Asp Thr Thr Ile Leu Gly  
 275 280 285  
 Leu Ser Lys Glu Glu Ala Glu Lys Lys Pro Tyr Ile Ala Ser Met Gly  
 290 295 300  
 Val Tyr Val Phe Lys Lys Glu Ile Leu Leu Asn Leu Leu Arg Trp Arg  
 305 310 315 320  
 Phe Pro Thr Ala Asn Asp Phe Gly Ser Glu Ile Ile Pro Phe Ser Ala  
 325 330 335  
 Lys Glu Phe Tyr Val Asn Ala Tyr Leu Phe Asn Asp Tyr Trp Glu Asp  
 340 345 350  
 Ile Gly Thr Ile Arg Ser Phe Phe Glu Ala Asn Leu Ala Leu Thr Glu  
 355 360 365

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His Pro Gly Ala Phe Ser Phe Tyr Asp Ala Ala Lys Pro Ile Tyr Thr  
370 375 380

Ser Arg Arg Asn Leu Pro Pro Ser Lys Ile Asp Asn Ser Lys Leu Ile  
385 390 395 400

Asp Ser Ile Ile Ser His Gly Ser Phe Leu Thr Asn Cys Leu Ile Glu  
405 410 415

His Ser Ile Val Gly Ile Arg Ser Arg Val Gly Ser Asn Val Gln Leu  
420 425 430

Lys Asp Thr Val Met Leu Gly Ala Asp Tyr Tyr Glu Thr Glu Ala Glu  
435 440 445

Val Ala Ala Leu Leu Ala Glu Gly Asn Val Pro Ile Gly Ile Gly Glu  
450 455 460

Asn Thr Lys Ile Gln Glu Cys Ile Ile Asp Lys Asn Ala Arg Val Gly  
465 470 475 480

Lys Asn Val Ile Ile Ala Asn Ser Glu Gly Ile Gln Glu Ala Asp Arg  
485 490 495

Ser Ser Asp Gly Phe Tyr Ile Arg Ser Gly Ile Thr Val Ile Leu Lys  
500 505 510

Asn Ser Val Ile Lys Asp Gly Val Val Ile  
515 520

<210> 1945

<211> 723

<212> DNA

<213> Arabidopsis thaliana

<400> 1945  
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ggacagaatc ctactgacga gccacagaca agtaaaggac ccgagccgga taatgttcta 180  
ctcaaaatcg cttggtacgg atctgagcta ctcggaatag ctgcttctgt ttccgatct 240  
ccggagactt ctccgattgt gacaggcttt gaggttcctg ttgattgttc tggtcgagcc 300  
gttcgtgtag ctgtcgtgga ctcgattaaa caagacttta aacgatccta cttcgtcaca 360



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ggtaatttga cgccggaggt ttatgaggag aagtgtgaat tcgctgatcc ggctggatcc	420
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tccaatatga agctcatgaa atgggagaat ttgaggata aaggaattgg acattggaaa	540
tttagctgtg tcatgtcggt tccatggaaa cccattcttt cagcaactgg ttacacggag	600
tattatttcg acacagaatc cgggaaaatt tgcaggcacg tggagcattg gaatgtccct	660
aagattgtct tgttcaaca acttctgaga cccagccgtg gtttagtggg gacacaaaa	720
tag	723

<210> 1946

<211> 240

<212> PRT

<213> Arabidopsis thaliana

<400> 1946

Met Val Ala Ser	Leu Ser Phe His Ser	Ile Ala Thr Val Asn	Pro Ile
1	5	10	15

Phe Ser Gly Asp	Gly Gly Arg Ser	Ile Phe Arg Thr Asn	Arg Arg Phe
20	25	30	

Glu Ala Thr Gly Val Ser Cys Arg	Gly Gln Asn Pro Thr Asp Glu Pro
35	40

Gln Thr Ser Lys Gly Pro Glu Pro Asp Asn Val	Leu Leu Lys Ile Ala
50	55

Trp Tyr Gly Ser Glu Leu Leu Gly Ile Ala Ala Ser Val Phe Arg Ser
65

Pro Glu Thr Ser Pro Ile Val Thr Gly Phe Glu Val Pro Val Asp Cys
85

Ser Gly Arg Ala Val Arg Val Ala Val Val Asp Ser Ile Lys Gln Asp
100

Phe Lys Arg Ser Tyr Phe Val Thr Gly Asn Leu Thr Pro Glu Val Tyr
115

Glu Glu Lys Cys Glu Phe Ala Asp Pro Ala Gly Ser Phe Lys Gly Leu
130

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Ala Arg Phe Lys Arg Asn Cys Thr Asn Phe Gly Ser Leu Ile Glu Lys  
 145 150 155 160  
 Ser Asn Met Lys Leu Met Lys Trp Glu Asn Phe Glu Asp Lys Gly Ile  
 165 170 175  
 Gly His Trp Lys Phe Ser Cys Val Met Ser Phe Pro Trp Lys Pro Ile  
 180 185 190  
 Leu Ser Ala Thr Gly Tyr Thr Glu Tyr Tyr Phe Asp Thr Glu Ser Gly  
 195 200 205  
 Lys Ile Cys Arg His Val Glu His Trp Asn Val Pro Lys Ile Ala Leu  
 210 215 220  
 Phe Lys Gln Leu Leu Arg Pro Ser Arg Gly Leu Val Gly Thr Gln Asn  
 225 230 235 240

<210> 1947

<211> 1155

<212> DNA

<213> Arabidopsis thaliana

<400> 1947  
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 tcaatggaga ccgatctcaa gtcaaccttt ctcaacgttt attctgttct caagtctgac 180  
 ctcttctcatg acccttctct cgaattcacc aatgaatctc gtctctgggt tgatcggatg 240  
 ctggactaca atgtacgtgg agggaaactc aatcggggtc tctctgttgt tgacagtttc 300  
 aaacttttga agcaaggcaa tgatttgact gagcaagagg ttttctcttc ttgtgctctc 360  
 ggttggtgca ttgaatggct ccaagcttat ttcttgtgc ttgatgatata tatggataac 420  
 tctgtcactc gccgtgggtc accttgctgg ttctagagttc ctctcaggttg tatggttgcc 480  
 atcaatgatg ggattctact tcgcaatcac atccacagga ttctcaaaaa gcatttccgt 540  
 gataagcctt actatgttga ccttggtgat ttgtttaatg aggttgagtt gcaaacagct 600  
 tgtggccaga tgatagattt gatcaccacc ttggaaggag aaaaggattt ggccaagtac 660  
 tcattgtcaa tccaccgtcg tattgtccag tacaaaaagg cttattactc attttatctc 720  
 cctgttgctt gtgcgttgct tatggccggc gaaaatttgg aaaccatat tgatgtgaag 780  
 aatgttcttg ttgacatggg aatctacttc caagtgcagg atgattatct ggattgtttt 840

047-E2F-PCT.ST25.txt

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tatggtaaac ccgacccatc gaacgttgct aaagtgaagg atctctacaa agagctggat	1020
cttgaggggag ttttcatgga gtatgagagc aaaagctacg agaagctgac tggagcgatt	1080
gagggacacc aaagtaaagc aatccaagca gtgctaaaaa ctttcttggc taagatctac	1140
aagaggcaga agtag	1155

<210> 1948

<211> 384

<212> PRT

<213> Arabidopsis thaliana

<400> 1948

Met Ser Val Ser Cys Cys Cys Arg Asn Leu Gly Lys Thr Ile Lys Lys  
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Ala Ile Pro Ser His His Leu His Leu Arg Ser Leu Gly Gly Ser Leu  
20 25 30

Tyr Arg Arg Arg Ile Gln Ser Ser Ser Met Glu Thr Asp Leu Lys Ser  
35 40 45

Thr Phe Leu Asn Val Tyr Ser Val Leu Lys Ser Asp Leu Leu His Asp  
50 55 60

Pro Ser Phe Glu Phe Thr Asn Glu Ser Arg Leu Trp Val Asp Arg Met  
65 70 75 80

Leu Asp Tyr Asn Val Arg Gly Gly Lys Leu Asn Arg Gly Leu Ser Val  
85 90 95

Val Asp Ser Phe Lys Leu Leu Lys Gln Gly Asn Asp Leu Thr Glu Gln  
100 105 110

Glu Val Phe Leu Ser Cys Ala Leu Gly Trp Cys Ile Glu Trp Leu Gln  
115 120 125

Ala Tyr Phe Leu Val Leu Asp Asp Ile Met Asp Asn Ser Val Thr Arg  
130 135 140

Arg Gly Gln Pro Cys Trp Phe Arg Val Pro Gln Val Gly Met Val Ala  
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145 150 160

Ile Asn Asp Gly Ile Leu Leu Arg Asn His Ile His Arg Ile Leu Lys  
165 170 175

Lys His Phe Arg Asp Lys Pro Tyr Tyr Val Asp Leu Val Asp Leu Phe  
180 185 190

Asn Glu Val Glu Leu Gln Thr Ala Cys Gly Gln Met Ile Asp Leu Ile  
195 200 205

Thr Thr Phe Glu Gly Glu Lys Asp Leu Ala Lys Tyr Ser Leu Ser Ile  
210 215 220

His Arg Arg Ile Val Gln Tyr Lys Thr Ala Tyr Tyr Ser Phe Tyr Leu  
225 230 235 240

Pro Val Ala Cys Ala Leu Leu Met Ala Gly Glu Asn Leu Glu Asn His  
245 250 255

Ile Asp Val Lys Asn Val Leu Val Asp Met Gly Ile Tyr Phe Gln Val  
260 265 270

Gln Asp Asp Tyr Leu Asp Cys Phe Ala Asp Pro Glu Thr Leu Gly Lys  
275 280 285

Ile Gly Thr Asp Ile Glu Asp Phe Lys Cys Ser Trp Leu Val Val Lys  
290 295 300

Ala Leu Glu Arg Cys Ser Glu Glu Gln Thr Lys Ile Leu Tyr Glu Asn  
305 310 315 320

Tyr Gly Lys Pro Asp Pro Ser Asn Val Ala Lys Val Lys Asp Leu Tyr  
325 330 335

Lys Glu Leu Asp Leu Glu Gly Val Phe Met Glu Tyr Glu Ser Lys Ser  
340 345 350

Tyr Glu Lys Leu Thr Gly Ala Ile Glu Gly His Gln Ser Lys Ala Ile  
355 360 365

Gln Ala Val Leu Lys Ser Phe Leu Ala Lys Ile Tyr Lys Arg Gln Lys  
370 375 380

<210> 1949

<211> 930

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1949

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gtcgtcaacg ccgagcaacg tcgtatcgcc gaggaggctg gtgcttgcgc cgtcatggct      180
ttggagcgtg ttcttgctga tatcccgctc caaggaggcg tcgctcgatg gagcgatcca      240
caaatgatta aagaaatcaa acaagccggt acgattccgg tgatggctaa ggctaggatt      300
ggtcatttgc ttgaagctca gatccttgaa gcaattggaa tcgattacat cgatgagagc      360
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atgcagcttg gatgtgatgg tgtctttggt ggttctggtg tcttcaagag cggtgaccga      780
gctcgtcgtg cacgtgccat tgttcaggct gtgactcatt acagtgacct tgagatgctt      840
gtggagggtg gctgtggggt tggagaagcc atggttggtg tcaatctcaa cgatgagaag      900
gttgagaggt tcgctaattc ctccgagtga      930

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&lt;210&gt; 1950

&lt;211&gt; 309

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1950

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Met Glu Gly Thr   Gly Val Val Ala Val   Tyr Gly Asn Gly Ala Ile Thr
 1             5             10             15

Glu Ala Lys Lys Ser Pro Phe Ser Val Lys Val Gly Leu Ala Gln Met
      20             25             30

Leu Arg Gly Gly Val Ile Met Asp Val Val Asn Ala Glu Gln Ala Arg
      35             40             45

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047-E2F-PCT.ST25.txt

Ile Ala Glu Glu Ala Gly Ala Cys Ala Val Met Ala Leu Glu Arg Val  
50 55 60

Pro Ala Asp Ile Arg Ala Gln Gly Gly Val Ala Arg Met Ser Asp Pro  
65 70 75 80

Gln Met Ile Lys Glu Ile Lys Gln Ala Val Thr Ile Pro Val Met Ala  
85 90 95

Lys Ala Arg Ile Gly His Phe Val Glu Ala Gln Ile Leu Glu Ala Ile  
100 105 110

Gly Ile Asp Tyr Ile Asp Glu Ser Glu Val Leu Thr Leu Ala Asp Glu  
115 120 125

Asp His His Ile Asn Lys His Asn Phe Arg Ile Pro Phe Val Cys Gly  
130 135 140

Cys Arg Asn Leu Gly Glu Ala Leu Arg Arg Ile Arg Glu Gly Ala Ala  
145 150 155 160

Met Ile Arg Thr Lys Gly Glu Ala Gly Thr Gly Asn Ile Ile Glu Ala  
165 170 175

Val Arg His Val Arg Ser Val Asn Gly Asp Ile Arg Val Leu Arg Asn  
180 185 190

Met Asp Asp Asp Glu Val Phe Thr Phe Ala Lys Lys Leu Ala Ala Pro  
195 200 205

Tyr Asp Leu Val Met Gln Thr Lys Gln Leu Gly Arg Leu Pro Val Val  
210 215 220

Gln Phe Ala Ala Gly Gly Val Ala Thr Pro Ala Asp Ala Ala Leu Met  
225 230 235 240

Met Gln Leu Gly Cys Asp Gly Val Phe Val Gly Ser Gly Ile Phe Lys  
245 250 255

Ser Gly Asp Pro Ala Arg Arg Ala Arg Ala Ile Val Gln Ala Val Thr  
260 265 270

His Tyr Ser Asp Pro Glu Met Leu Val Glu Val Ser Cys Gly Leu Gly  
275 280 285

Glu Ala Met Val Gly Ile Asn Leu Asn Asp Glu Lys Val Glu Arg Phe  
290 295 300

Ala Asn Arg Ser Glu  
305

<210> 1951

<211> 1314

<212> DNA

<213> *Arabidopsis thaliana*

<400> 1951

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aaaccaccgg aatcaccagc caccaaaactc tcattcccga gactcttctc ctggtttgat	120
caatcaaatc gcatcaaaac tctgctctca tgggccatct tcttctctc cgcgctcatc	180
gtcccaatga tctcacactt cgtgctaata tgcgccgatt gcgatttcaa acaccgtcgt	240
ccttacgacg gtttagtgca gctttcgta tcgatcttcg ccggaatctc gtcgtagt	300
ctctcagatt ggtccaagaa atatggaatc cgaagggttc tcttcttcga taagcttaaa	360
gatgttagcg ataaagttag gatcggatac gaagctaaaa tccagagatc aatgaagcta	420
ctagctatct ttgtccttcc atcgacaacg cttcaagcta tctatcgcat ttggtggtat	480
gcttcaggct ttaaccaaat cccttacatt ataaaccaa cgctgagcca tgtcttagcc	540
tgacactcc agctctcttc ttggctctac cgtacatcac tcttcatcat tgcctgtatc	600
ctctacaaa acatcttgcca cctccaggtc ctccgtcttg atgaattcgc acgctgcttc	660
gcctctgaga tcaaagattt cagttccata ctgcgccgag atctcaaaat ccgctgtgaa	720
ctgaagattg tcagtcaccg gttcagacga ttcatctctt tgtcattggt tttcgtcact	780
gccactcagt tcattggcatt gctgactacc atcagagcta gtgttccctt taatatctac	840
gaagtgtggc agctcgcgtt atgctccaca agcttgggtg caggactatt catatgcttg	900
aaaagtgcga cacaaatgac tcacaaagct caatcagtaa cgagcatcgc cacaaagtgg	960
aacgtgtgcg cgtctttaga tacatttgat gttctttatg acggagagac tcctaaatgt	1020
ccaacaacta cacaacattc ccagatttta tcgcgtcgtc gtaatgttgt tcaatcgctt	1080
gatgatgatg aagaaggaga aggagatgac aatgatcttg agatacatcc aatctttgcc	1140
cgcgccattt cttctcagaa acgtcaagct ctagtgcctt atctagagaa caacagagca	1200
gggactactg tttacggatt cttggtggat aaaacatggt tgcgtatgat cttcagcatc	1260
gaacttgctc ttcttctatg gctgctcaaa aagacaatca tgaacataac atga	1314

<210> 1952

&lt;211&gt; 437

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1952

Met Glu Glu Ser Ser Asn Gln Gln Ile Leu Asn Ser Glu Thr Arg Pro  
 1 5 10 15

Asp Pro Ile Gln Lys Pro Pro Glu Ser Pro Ala Thr Lys Leu Ser Phe  
 20 25 30

Pro Arg Leu Phe Leu Trp Phe Asp Gln Ser Asn Arg Ile Lys Thr Leu  
 35 40 45

Leu Ser Trp Ser Ile Phe Phe Leu Leu Ala Val Ile Val Pro Met Ile  
 50 55 60

Ser His Phe Val Leu Ile Cys Ala Asp Cys Asp Phe Lys His Arg Arg  
 65 70 75 80

Pro Tyr Asp Gly Leu Val Gln Leu Ser Leu Ser Ile Phe Ala Gly Ile  
 85 90 95

Ser Phe Val Ser Leu Ser Asp Trp Ser Lys Lys Tyr Gly Ile Arg Arg  
 100 105 110

Phe Leu Phe Phe Asp Lys Leu Lys Asp Val Ser Asp Lys Val Arg Ile  
 115 120 125

Gly Tyr Glu Ala Lys Ile Gln Arg Ser Met Lys Leu Leu Ala Ile Phe  
 130 135 140

Val Leu Pro Ser Thr Thr Leu Gln Ala Ile Tyr Arg Ile Trp Trp Tyr  
 145 150 155 160

Ala Ser Gly Phe Asn Gln Ile Pro Tyr Ile Ile Asn Pro Thr Leu Ser  
 165 170 175

His Val Leu Ala Cys Thr Leu Gln Leu Ser Ser Trp Leu Tyr Arg Thr  
 180 185 190

Ser Leu Phe Ile Ile Ala Cys Ile Leu Tyr Gln Asn Ile Cys His Leu  
 195 200 205



Gln Val Leu Arg Leu Asp Glu Phe Ala Arg Cys Phe Ala Ser Glu Ile  
 210 215 220

Lys Asp Phe Ser Ser Ile Leu Ala Glu His Leu Lys Ile Arg Arg Glu  
 225 230 235 240

Leu Lys Ile Val Ser His Arg Phe Arg Arg Phe Ile Leu Leu Ser Leu  
 245 250 255

Phe Phe Val Thr Ala Thr Gln Phe Met Ala Leu Leu Thr Thr Ile Arg  
 260 265 270

Ala Ser Val Pro Phe Asn Ile Tyr Glu Val Gly Glu Leu Ala Leu Cys  
 275 280 285

Ser Thr Ser Leu Val Ser Gly Leu Phe Ile Cys Leu Lys Ser Ala Thr  
 290 295 300

Gln Met Thr His Lys Ala Gln Ser Val Thr Ser Ile Ala Thr Lys Trp  
 305 310 315 320

Asn Val Cys Ala Ser Leu Asp Thr Phe Asp Val Leu Tyr Asp Gly Glu  
 325 330 335

Thr Pro Lys Cys Pro Thr Thr Thr Gln His Ser Gln Ile Leu Ser Arg  
 340 345 350

Arg Arg Asn Val Val Gln Ser Ser Asp Asp Asp Glu Glu Gly Glu Gly  
 355 360 365

Asp Asp Asn Asp Leu Glu Ile His Pro Ile Phe Ala Arg Ala Ile Ser  
 370 375 380

Ser Gln Lys Arg Gln Ala Leu Val Thr Tyr Leu Glu Asn Asn Arg Ala  
 385 390 395 400

Gly Ile Thr Val Tyr Gly Phe Leu Val Asp Lys Thr Trp Leu Arg Met  
 405 410 415

Ile Phe Ser Ile Glu Leu Ala Leu Leu Trp Leu Leu Lys Lys Thr  
 420 425 430

Ile Met Asn Ile Thr  
 435

<210> 1953

<211> 1377

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1953

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gacgatgtat atgagggtgt aagaaaagtg tatgtagggc aagatctcaa ccgtatcact	120
tacatcaagt ttgagtacgt gcaggaagac ggcgaagtag taacaactga atatgggaca	180
acaaatcagc accctaaga gttttgaatt caatacccg acgaacacat catagcagtg	240
gagggaaagt accaccaagt ggctctcatt gccacagagg tgattacgtc cctcgtcttc	300
aagacctcaa agggtagaaa gtctccattg tttggtccaa acttacttgg aattacgacc	360
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&lt;210&gt; 1954

&lt;211&gt; 458

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1954

Met Ala Lys Met Tyr Arg Lys Leu Ala Leu Cys Gly Gly Glu Gly Gly  
 1 5 10 15

Gln Glu Trp Asp Asp Asp Val Tyr Glu Gly Val Arg Lys Val Tyr Val  
 20 25 30

Gly Gln Asp Leu Asn Arg Ile Thr Tyr Ile Lys Phe Glu Tyr Val Gln  
 35 40 45

Glu Asp Gly Glu Val Val Thr Thr Glu Tyr Gly Thr Thr Asn Gln His  
 50 55 60

Pro Lys Glu Phe Val Ile Gln Tyr Pro Asp Glu His Ile Ile Ala Val  
 65 70 75 80

Glu Gly Ser Tyr His Gln Val Ala Leu Ile Ala Thr Glu Val Ile Thr  
 85 90 95

Ser Leu Val Phe Lys Thr Ser Lys Gly Arg Lys Ser Pro Leu Phe Gly  
 100 105 110

Pro Asn Leu Leu Gly Ile Thr Thr Gly Thr Lys Phe Val Phe Glu Asp  
 115 120 125

Glu Gly Lys Lys Ile Val Gly Phe His Gly Arg Ala Gly Asp Ala Val  
 130 135 140

Asp Ala Leu Gly Val Tyr Phe Val Leu Asp Thr Thr Pro Phe Pro Leu  
 145 150 155 160

Tyr Lys Leu Asp Ala Gln Gly Gly Thr Asp Gly Arg Val Trp Asp  
 165 170 175

Gly Ser Tyr Asp Gly Ile Lys Thr Leu Arg Ile Asp Gln Asp Asn Ser  
 180 185 190

Arg Ile Thr Tyr Leu Glu Val Glu Tyr Glu Lys Asp Gly Glu Ala Lys  
 195 200 205

Thr Cys Asn His Gly Gly Lys Gly Asp Thr Pro Ser Glu Phe Val Leu  
 210 215 220

Gly Tyr Pro Asp Glu Tyr Ile Lys Ser Val Glu Ala Thr Tyr Gln Lys  
 225 230 235 240

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Pro Asn Ile Phe Ser Asn Thr Ala Ile Thr Ser Leu Lys Phe Leu Thr  
245 250 255

Ser Lys Gly Arg Thr Ser Phe Phe Gly Tyr Asn Val Gly Lys Lys Phe  
260 265 270

Val Leu Glu Gln Lys Gly His Arg Leu Val Gly Phe His Gly Lys Glu  
275 280 285

Asp Ala Ala Ile Asp Ala Leu Gly Ala Tyr Phe Gly Pro Val Pro Thr  
290 295 300

Pro Thr Pro Leu Ile Pro Ser Lys Lys Leu Pro Ala Ile Gly Gly Asn  
305 310 315 320

Glu Gly Val Thr Trp Asp Asp Gly Val Tyr Asp Gly Val Arg Lys Ile  
325 330 335

Leu Val Gly Gln Gly Asn Asp Gly Val Ser Phe Val Lys Phe Glu Tyr  
340 345 350

Ser Lys Gly Lys Asp Leu Val Pro Gly Asp Asp His Gly Lys Lys Thr  
355 360 365

Leu Leu Gly Ala Glu Glu Phe Val Leu Glu Asp Gly Glu Tyr Leu Met  
370 375 380

Asn Ile Asp Gly Tyr Tyr Asp Lys Ile Phe Gly Val Glu Glu Pro Ile  
385 390 395 400

Ile Val Cys Leu Gln Phe Lys Thr Asn Lys Arg Glu Ser Met Pro Phe  
405 410 415

Gly Met Asp Ser Gly Lys Lys Phe Ser Leu Gly Glu Glu Gly His Lys  
420 425 430

Ile Val Gly Phe His Gly Gln Ala Ser Asp Val Val His Ser Ile Gly  
435 440 445

Val Thr Ile Val Pro Ile Thr Thr Thr Glu  
450 455

<210> 1955

<211> 609

<212> DNA

<213> *Arabidopsis thaliana*

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<400> 1955
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gtcgccggcg aaggtagctg gaagaagcta gagaggaaga agagccaagt gttactggaa    180
ggttacgttg agactgcttc ttcttcctcg gtggatgatc aaaaggacga tctgacgaga    240
tccaagagtt tgacggatga cgacctcgaa gatcttagag gttgtttaga tctagggttt    300
ggttttagct acgacgagat ccctgagctc tgcaacactt tacctgcttt ggagctttgc    360
tattcaatga gccagaagtt cttagacgat aagcaaaata aatcaccgga aacttcgctg    420
gtggaagatt gtcctgcgcc tccactggtc accgccactc cgattgcca ttggaagatc    480
tctagtcctc gtgataatcc ggatgatgtg aaagctaggc tcaaatactg ggcacaagcc    540
gttgccctgc tgagagactt tgtgtttatg agagctatca ctaactggtt atggacctcc    600
acttgctga                                     609

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&lt;210&gt; 1956

&lt;211&gt; 202

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

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<400> 1956
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20     25     30
Glu Ile Ser Ser Arg Arg Ser Phe Val Ala Gly Glu Gly Ser Arg Lys
35     40     45
Lys Leu Glu Arg Lys Lys Ser Gln Val Leu Leu Glu Gly Tyr Val Glu
50     55     60
Thr Ala Ser Ser Ser Ser Val Asp Asp Gln Lys Asp Asp Leu Thr Arg
65     70     75     80
Ser Lys Ser Leu Thr Asp Asp Asp Leu Glu Asp Leu Arg Gly Cys Leu
85     90     95

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Asp Leu Gly Phe Gly Phe Ser Tyr Asp Glu Ile Pro Glu Leu Cys Asn  
100 105 110

Thr Leu Pro Ala Leu Glu Leu Cys Tyr Ser Met Ser Gln Lys Phe Leu  
115 120 125

Asp Asp Lys Gln Asn Lys Ser Pro Glu Thr Ser Ser Val Glu Asp Cys  
130 135 140

Pro Ser Pro Pro Leu Val Thr Ala Thr Pro Ile Ala Asn Trp Lys Ile  
145 150 155 160

Ser Ser Pro Gly Asp Asn Pro Asp Asp Val Lys Ala Arg Leu Lys Tyr  
165 170 175

Trp Ala Gln Ala Val Ala Leu Leu Arg Asp Phe Val Phe Met Arg Ala  
180 185 190

Ile Thr Asn Trp Leu Trp Thr Ser Thr Cys  
195 200

<210> 1957

<211> 858

<212> DNA

<213> Arabidopsis thaliana

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ttgaacactg tcattcaaa ggtgtgacaac aaaatctctt ttgcccgcca agcatcatct 180  
gaacagggct tttttatgat gccagcttca cccgatgatg tccttgagaa cttaggtatg 240  
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cctgcgtacg ctgcaccaca cttttctaag cctgcaaaa aggacatctt ttttcttct 480  
ttatcaccaa atctgcaaaa ggaaaggcct aagcttgatc ttctaagtt agccaattta 540  
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atccttggat atcataagca agaaatacta caaggaccat tcaaagtttc ctggccactc 780  
 cccagcaatg tgaacaagga taatgtttcc gctgaattta tggatgggat tctgagaata 840  
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<210> 1958

<211> 285

<212> PRT

<213> Arabidopsis thaliana

<400> 1958

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Val Pro Leu Asn Cys Ser Ser Ser Leu Asn Thr Val Ile Gln Arg Cys  
 35 40 45

Asp Asn Lys Ile Ser Phe Ala Arg Gln Ala Ser Ser Glu Gln Gly Phe  
 50 55 60

Phe Met Arg Pro Ala Ser Pro Asp Asp Val Leu Glu Asn Leu Gly Met  
 65 70 75 80

Asn Leu Lys Asn Thr Val Val Arg Arg Gly Asp Asn Arg Leu Tyr Phe  
 85 90 95

Ala Arg Gln Ala Ser Ser Ala Gln Gly Phe Phe Met Arg Gln Ala Ser  
 100 105 110

Thr Asn Glu Arg Thr Ile Pro His Asp Ala Ala Ala Ser Thr Lys Phe  
 115 120 125

Ser Ala Thr Lys Thr Thr Gly Phe Asp Ser Ser Ser Pro Ala Tyr Ala  
 130 135 140

Ala Pro His Phe Ser Lys Pro Ala Lys Glu Asp Ile Phe Phe Pro Ser  
 145 150 155 160

Leu Ser Pro Asn Leu Gln Lys Glu Arg Pro Lys Leu Asp Leu Pro Lys  
 165 170 175

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Leu Ala Asn <sup>Leu</sup> Gly Thr Val Trp <sup>Ser</sup> Pro Arg Ser Asn <sup>Val</sup> Ala Glu  
<sub>180</sub> <sub>185</sub> <sub>190</sub>

Ser Thr <sup>His</sup> Ser Tyr Val Val <sup>Ala</sup> Ile Glu Leu Pro <sup>Gly</sup> Ala Ser Ile  
<sub>195</sub> <sub>200</sub> <sub>205</sub>

Asn Asp <sup>Ile</sup> Arg Val Glu <sup>Val</sup> Asp Asn Thr Asn <sup>Leu</sup> Thr Val Thr Gly  
<sub>210</sub> <sub>215</sub> <sub>220</sub>

Arg Arg Thr Ser <sup>Ile</sup> Cys Gln Lys Val <sup>Asp</sup> <sup>Ala</sup> Gly Thr Lys <sup>Ala</sup> Ser  
<sub>225</sub> <sub>230</sub> <sub>235</sub> <sub>240</sub>

Ile Leu Gly Tyr <sup>His</sup> Lys Gln Glu Ile <sup>Leu</sup> Gln Gly Pro Phe <sup>Lys</sup> Val  
<sub>245</sub> <sub>250</sub> <sub>255</sub>

Ser Trp Pro <sup>Leu</sup> Pro Ser Asn Val <sup>Asn</sup> Lys Asp Asn <sup>Val</sup> Ser <sup>Ala</sup> Glu  
<sub>260</sub> <sub>265</sub> <sub>270</sub>

Phe Met <sup>Asp</sup> Gly Ile Leu Arg <sup>Ile</sup> Val Ile Pro Lys <sup>Leu</sup>  
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<210> 1959

<211> 1464

<212> DNA

<213> Arabidopsis thaliana

<400> 1959  
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aaagtctcga agtttcaatt tcatgtaacc ctaagccctt ttgcctttcg tggttttctca 180  
atatgtcgcg aatttgcgtg tcgtggagct tatggggatta gattttgctc acgagaagat 240  
gtttccggtg ttggaaattg aggaatcgtg gcggaggagg agattgagct attgaacaag 300  
ccgaatcctt taccaaaatc agaaaatgag gagagtggta aagcagacga tgacgcgatt 360  
ctggagccgt ttttgaaatt ctttaaaccg gaagaagaag ggggaaggaaat tgaatcggaa 420  
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atgttgggaa ctatgttgac gaaagagata cttcctttgt atgataaaga gttggattat 600  
ttgttgtgtg atttgaagta tgatgctgaa gagtttttgg ttaatgggaa aatggggatt 660  
gttaaggatg atgatgaagg tgttgagatt gcggagtttg ctgcggcaagg taggcgggtg 720



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caacttaatg	agcctattga	agttaagata	acagagtgga	atactggagg	gcttctcacc	900
agaattgagg	gcttgagagc	ttttattccg	aagcaggaac	tggtgggtcg	tagattccct	960
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ccatattggag	ctcaagtcaa	acttggggat	agtagcagaa	gtggactgct	acacatttca	1140
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gaaagcgaac	caggattggt	catctcagac	agagagaaag	tgtttacgga	agctgaagag	1320
atggcgaaga	agtacagaga	aaaaatgcct	ttggtggcta	caagtccaat	ttctgatcgt	1380
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<210> 1960

<211> 487

<212> PRT

<213> Arabidopsis thaliana

<400> 1960

Met	Gln	Thr	Leu	Leu	Cys	Gln	Pro	Cys	Lys	Ser	Leu	Pro	Ile	Leu	Thr
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Ala	Ser	Ser	Ser	Ser	Ser	Leu	Ile	Arg	Ser	Ser	Gly	Asp	Val	Arg	Glu
			20					25					30		

Cys	Ile	Asp	Phe	Arg	Ala	Ser	Glu	Lys	Val	Ser	Lys	Phe	Gln	Phe	His
	35					40						45			

Val	Thr	Leu	Ser	Pro	Phe	Ala	Phe	Arg	Gly	Phe	Ser	Ile	Cys	Arg	Glu
	50					55					60				

Phe	Ala	Val	Arg	Gly	Ala	Tyr	Gly	Ile	Arg	Phe	Cys	Ser	Arg	Glu	Asp
65					70					75				80	

Val	Ser	Gly	Val	Gly	Asn	Gly	Gly	Ile	Val	Ala	Glu	Glu	Glu	Ile	Glu
			85						90					95	

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Leu Leu Asn Lys Pro Asn Pro Leu Pro Lys Ser Glu Asn Glu Glu Ser  
 100 105 110  
 Gly Lys Ala Asp Asp Asp Ala Ile Leu Glu Pro Phe Leu Lys Phe Phe  
 115 120  
 Lys Pro Glu Glu Glu Gly Glu Gly Ile Glu Ser Glu Val Ser Asp Glu  
 130 135 140  
 Thr Asp Arg Val Ser Val Glu Tyr Tyr Asp Pro Lys Pro Gly Asp Phe  
 145 150 155 160  
 Val Val Gly Val Val Val Ser Gly Asn Glu Asn Lys Leu Asp Val Asn  
 165 170 175  
 Ile Gly Ala Asp Met Leu Gly Thr Met Leu Thr Lys Glu Ile Leu Pro  
 180 185 190  
 Leu Tyr Asp Lys Glu Leu Asp Tyr Leu Leu Cys Asp Leu Lys Tyr Asp  
 195 200 205  
 Ala Glu Glu Phe Leu Val Asn Gly Lys Met Gly Ile Val Lys Asp Asp  
 210 215 220  
 Asp Glu Gly Val Glu Ile Ala Glu Phe Ala Arg Gln Gly Arg Pro Val  
 225 230 235 240  
 Val Glu Ile Gly Thr Val Val Phe Ala Glu Val Leu Gly Arg Thr Leu  
 245 250 255  
 Ser Gly Arg Pro Leu Leu Ser Ser Arg Arg Tyr Phe Arg Arg Ile Ala  
 260 265 270  
 Trp His Arg Val Arg Gln Ile Lys Gln Leu Asn Glu Pro Ile Glu Val  
 275 280 285  
 Lys Ile Thr Glu Trp Asn Thr Gly Gly Leu Leu Thr Arg Ile Glu Gly  
 290 295 300  
 Leu Arg Ala Phe Ile Pro Lys Gln Glu Leu Val Gly Arg Arg Phe Leu  
 305 310 315 320  
 Val Gln Ile Thr Arg Leu Asn Glu Asp Lys Asn Asp Leu Ile Leu Ser  
 325 330 335  
 Glu Lys Val Ala Trp Glu Lys Leu Tyr Leu Arg Glu Gly Thr Leu Leu  
 340 345 350

Glu Gly Thr Val Val Lys Ile Leu Pro Tyr Gly Ala Gln Val Lys Leu  
 355 360 365

Gly Asp Ser Ser Arg Ser Gly Leu Leu His Ile Ser Asn Ile Thr Arg  
 370 375 380

Arg Arg Ile Gly Ser Val Ser Asp Val Leu Gln Val Asp Glu Ser Val  
 385 390 395 400

Lys Val Leu Val Val Lys Ser Leu Phe Pro Asp Lys Ile Ser Leu Ser  
 405 410 415

Ile Ala Asp Leu Glu Ser Glu Pro Gly Leu Phe Ile Ser Asp Arg Glu  
 420 425 430

Lys Val Phe Thr Glu Ala Glu Glu Met Ala Lys Lys Tyr Arg Glu Lys  
 435 440 445

Met Pro Leu Val Ala Thr Ser Pro Ile Ser Asp Arg Pro Pro Ile Thr  
 450 455 460

Ser Ser Phe Pro Gln Gly Lys Asp Glu Glu Ile Tyr Ala Asn Trp Glu  
 465 470 475 480

Trp Phe Lys Phe Glu Ser Gln  
 485

<210> 1961

<211> 2352

<212> DNA

<213> Arabidopsis thaliana

<400> 1961

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cagtacgtga	gtacattgag	agggatgaca	aaaggtcgag	cttcttacac	aatgcaactg	2280
gctaagttcg	acgttgttcc	tcaacatatt	cagaaccaac	tttcatccaa	ggatcaagaa	2340

gttgctgctt aa

&lt;210&gt; 1962

&lt;211&gt; 783

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1962

Met Ala Ala Asp Ala Leu Arg Ile Ser Ser Ser Ser Ser Gly Ser Leu  
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35 40 45Ser Ile Ser Ser Ser Ile Pro Gln Phe Leu Gly Thr Ser Arg Ile Gly  
50 55 60Leu Gly Ser Ser Lys Leu Ser Gln Lys Lys Lys Gln Phe Ser Val Phe  
65 70 75 80Ala Ala Ala Glu Ala Glu Ala Lys Arg Ala Val Pro Leu Lys Asp Tyr  
85 90 95Arg Asn Ile Gly Ile Met Ala His Ile Asp Ala Gly Lys Thr Thr Thr  
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115 120 125Val His Glu Gly Thr Ala Thr Met Asp Trp Met Glu Gln Glu Gln Glu  
130 135 140Arg Gly Ile Thr Ile Thr Ser Ala Ala Thr Thr Thr Phe Trp Asp Lys  
145 150 155 160His Arg Ile Asn Ile Ile Asp Thr Pro Gly His Val Asp Phe Thr Leu  
165 170 175Glu Val Glu Arg Ala Leu Arg Val Leu Asp Gly Ala Ile Cys Leu Phe  
180 185 190

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Asp Ser Val Ala Gly Val Glu Pro Gln Ser Glu Thr Val Trp Arg Gln  
 195 200  
 Ala Asp Lys Tyr Gly Val Pro Arg Ile Cys Phe Val Asn Lys Met Asp  
 210 215  
 Arg Leu Gly Ala Asn Phe Phe Arg Thr Arg Asp Met Ile Val Thr Asn  
 225 230 235 240  
 Leu Gly Ala Lys Pro Leu Val Leu Gln Ile Pro Ile Gly Ala Glu Asp  
 245 250 255  
 Val Phe Lys Gly Val Val Asp Leu Val Arg Met Lys Ala Ile Val Trp  
 260 265 270  
 Ser Gly Glu Glu Leu Gly Ala Lys Phe Ser Tyr Glu Asp Ile Pro Glu  
 275 280 285  
 Asp Leu Glu Asp Leu Ala Gln Glu Tyr Arg Ala Ala Met Met Glu Leu  
 290 295 300  
 Ile Val Asp Leu Asp Asp Glu Val Met Glu Asn Tyr Leu Glu Gly Val  
 305 310 315 320  
 Glu Pro Asp Glu Ala Thr Val Lys Arg Leu Val Arg Lys Gly Thr Ile  
 325 330 335  
 Thr Gly Lys Phe Val Pro Ile Leu Cys Gly Ser Ala Phe Lys Asn Lys  
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 Gly Val Gln Pro Leu Leu Asp Ala Val Val Asp Tyr Leu Pro Ser Pro  
 355 360 365  
 Val Glu Val Pro Pro Met Asn Gly Thr Asp Pro Glu Asn Pro Glu Ile  
 370 375 380  
 Thr Ile Ile Arg Lys Pro Asp Asp Asp Glu Pro Phe Ala Gly Leu Ala  
 385 390 395 400  
 Phe Lys Ile Met Ser Asp Pro Phe Val Gly Ser Leu Thr Phe Val Arg  
 405 410 415  
 Val Tyr Ser Gly Lys Ile Ser Ala Gly Ser Tyr Val Leu Asn Ala Asn  
 420 425 430  
 Lys Gly Lys Lys Glu Arg Ile Gly Arg Leu Leu Glu Met His Ala Asn  
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Ser Arg Glu Asp Val Lys Val Ala Leu Thr Gly Asp Ile Ile Ala Leu  
450 455 460

Ala Gly Leu Lys Asp Thr Ile Thr Gly Glu Thr Leu Ser Asp Pro Glu  
465 470 475 480

Asn Pro Val Val Leu Glu Arg Met Asp Phe Pro Asp Pro Val Ile Lys  
485 490 495

Val Ala Ile Glu Pro Lys Thr Lys Ala Asp Ile Asp Lys Met Ala Thr  
500 505 510

Gly Leu Ile Lys Leu Ala Gln Glu Asp Pro Ser Phe His Phe Ser Arg  
515 520 525

Asp Glu Glu Met Asn Gln Thr Val Ile Glu Gly Met Gly Glu Leu His  
530 535 540

Leu Glu Ile Ile Val Asp Arg Leu Lys Arg Glu Phe Lys Val Glu Ala  
545 550 555 560

Asn Val Gly Ala Pro Gln Val Asn Tyr Arg Glu Ser Ile Ser Lys Ile  
565 570 575

Ala Glu Val Lys Tyr Thr His Lys Lys Gln Ser Gly Gly Gln Gly Gln  
580 585 590

Phe Ala Asp Ile Thr Val Arg Phe Glu Pro Leu Glu Ala Gly Ser Gly  
595 600 605

Tyr Glu Phe Lys Ser Glu Ile Lys Gly Gly Ala Val Pro Arg Glu Tyr  
610 615 620

Ile Pro Gly Val Met Lys Gly Leu Glu Glu Cys Met Ser Thr Gly Val  
625 630 635 640

Leu Ala Gly Phe Pro Val Val Asp Val Arg Ala Cys Leu Val Asp Gly  
645 650 655

Ser Tyr His Asp Val Asp Ser Ser Val Leu Ala Phe Gln Leu Ala Ala  
660 665 670

Arg Gly Ala Phe Arg Glu Gly Met Arg Lys Ala Gly Pro Arg Met Leu  
675 680 685

Glu Pro Ile Met Arg Val Glu Val Val Thr Pro Glu Glu His Leu Gly

690

695

Asp Val Ile Gly Asp Leu Asn Ser Arg Arg Gly Gln Ile Asn Ser Phe  
705 710 715 720

Gly Asp Lys Pro Gly Gly Leu Lys Val Val Asp Ser Leu Val Pro Leu  
725 730 735

Ala Glu Met Phe Gln Tyr Val Ser Thr Leu Arg Gly Met Thr Lys Gly  
740 745 750

Arg Ala Ser Tyr Thr Met Gln Leu Ala Lys Phe Asp Val Val Pro Gln  
755 760 765

His Ile Gln Asn Gln Leu Ser Ser Lys Asp Gln Glu Val Ala Ala  
770 775 780

&lt;210&gt; 1963

&lt;211&gt; 2667

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1963

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gatgccgagg gttcttcaat tgggacgatg attaatccag gtgctggaag tgattctgga	240
gaaagaagct tgaattttct agttggtaca acagatgctc agaagtctga tgctaaagat	300
cagcaggatc ttcaatggca caccagggga gtagcagctc gtgctctgca tctttcaaga	360
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gttgctagct ttgagatgag ttttgaagag caactatcta tgctggattc agttgacctt	720
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&lt;211&gt; 888

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1964

Met Ala Glu Thr Val Glu Leu Pro Ser Arg Leu Ala Ile Leu Pro Phe  
1 5 10 15Arg Asn Lys Val Leu Leu Pro Gly Ala Ile Ile Arg Ile Arg Cys Thr  
20 25 30Ser His Ser Ser Val Thr Leu Val Glu Gln Glu Leu Trp Gln Lys Glu  
35 40 45Glu Lys Gly Leu Ile Gly Ile Leu Pro Val Arg Asp Asp Ala Glu Gly  
50 55 60Ser Ser Ile Gly Thr Met Ile Asn Pro Gly Ala Gly Ser Asp Ser Gly  
65 70 75 80Glu Arg Ser Leu Lys Phe Leu Val Gly Thr Thr Asp Ala Gln Lys Ser  
85 90 95Asp Ala Lys Asp Gln Gln Asp Leu Gln Trp His Thr Arg Gly Val Ala  
100 105 110Ala Arg Ala Leu His Leu Ser Arg Gly Val Glu Lys Pro Ser Gly Arg  
115 120 125Val Thr Tyr Val Val Val Leu Glu Gly Leu Ser Arg Phe Asn Val Gln  
130 135 140Glu Leu Gly Lys Arg Gly Pro Tyr Ser Val Ala Arg Ile Thr Ser Leu  
145 150 155 160Glu Met Thr Lys Ala Glu Leu Glu Gln Val Lys Gln Asp Pro Asp Phe  
165 170 175Val Ala Leu Ser Arg Gln Phe Lys Thr Thr Ala Met Glu Leu Val Ser  
180 185 190Val Leu Glu Gln Lys Gln Lys Thr Gly Gly Arg Thr Lys Val Leu Leu  
195 200 205

Glu Thr Val Pro Ile His Lys Leu Ala Asp Ile Phe Val Ala Ser Phe  
 210 215 220

Glu Met Ser Phe Glu Glu Gln Leu Ser Met Leu Asp Ser Val Asp Leu  
 225 230 235 240

Lys Val Arg Leu Ser Lys Ala Thr Glu Leu Val Asp Arg His Leu Gln  
 245 250 255

Ser Ile Arg Val Ala Glu Lys Ile Thr Gln Lys Val Glu Gly Gln Leu  
 260 265 270

Ser Lys Ser Gln Lys Glu Tyr Leu Leu Arg Gln Gln Met Arg Ala Ile  
 275 280 285

Lys Glu Glu Leu Gly Asp Asn Asp Asp Asp Glu Asp Asp Val Ala Ala  
 290 295 300

Leu Glu Arg Lys Met Gln Ala Ala Gly Met Pro Ser Asn Ile Trp Lys  
 305 310 315 320

His Ala Gln Arg Glu Leu Arg Arg Leu Lys Lys Met Gln Pro Gln Gln  
 325 330 335

Pro Gly Tyr Asn Ser Ser Arg Val Tyr Leu Glu Leu Leu Ala Asp Leu  
 340 345 350

Pro Trp Asp Lys Ala Ser Glu Glu His Glu Leu Asp Leu Lys Ala Ala  
 355 360 365

Lys Glu Arg Leu Asp Ser Asp His Tyr Gly Leu Ala Lys Val Lys Gln  
 370 375 380

Arg Ile Ile Glu Tyr Leu Ala Val Arg Lys Leu Lys Pro Asp Ala Arg  
 385 390 395 400

Gly Pro Val Leu Cys Phe Val Gly Pro Pro Gly Val Gly Lys Thr Ser  
 405 410 415

Leu Ala Ser Ser Ile Ala Ala Ala Leu Gly Arg Lys Phe Val Arg Leu  
 420 425 430

Ser Leu Gly Gly Val Lys Asp Glu Ala Asp Ile Arg Gly His Arg Arg  
 435 440 445

Thr Tyr Ile Gly Ser Met Pro Gly Arg Leu Ile Asp Gly Leu Lys Arg  
 450 455 460

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Val Gly Val Cys Asn Pro Val Met Leu Leu Asp Glu Ile Asp Lys Thr  
465 470 475 480

Gly Ser Asp Val Arg Gly Asp Pro Ala Ser Ala Leu Leu Glu Val Leu  
485 490 495

Asp Pro Glu Gln Asn Lys Ser Phe Asn Asp His Tyr Leu Asn Val Pro  
500 505 510

Tyr Asp Leu Ser Lys Val Val Phe Val Ala Thr Ala Asn Arg Val Gln  
515 520 525

Pro Ile Pro Pro Pro Leu Leu Asp Arg Met Glu Leu Ile Glu Leu Pro  
530 535 540

Gly Tyr Thr Gln Glu Glu Lys Leu Lys Ile Ala Met Arg His Leu Ile  
545 550 555 560

Pro Arg Val Leu Asp Gln His Gly Leu Ser Ser Glu Phe Leu Lys Ile  
565 570 575

Pro Glu Ala Met Val Lys Asn Ile Ile Gln Arg Tyr Thr Arg Glu Ala  
580 585 590

Gly Val Arg Ser Leu Glu Arg Asn Leu Ala Ala Leu Ala Arg Ala Ala  
595 600 605

Ala Val Met Val Ala Glu His Glu Gln Ser Leu Pro Leu Ser Lys Asp  
610 615 620

Val Gln Lys Leu Thr Ser Pro Leu Leu Asn Gly Arg Met Ala Glu Gly  
625 630 635 640

Gly Glu Val Glu Met Glu Val Ile Pro Met Gly Val Asn Asp His Glu  
645 650 655

Ile Gly Gly Thr Phe Gln Ser Pro Ser Ala Leu Val Val Asp Glu Thr  
660 665 670

Met Leu Glu Lys Ile Leu Gly Pro Pro Arg Phe Asp Asp Ser Glu Ala  
675 680 685

Ala Asp Arg Val Ala Ser Ala Gly Val Ser Val Gly Leu Val Trp Thr  
690 695 700

Thr Phe Gly Gly Glu Val Gln Phe Val Glu Ala Thr Ser Met Val Gly  
705 710 715 720

047-E2F-PCT.ST25.txt

Lys Gly Glu Met His Leu Thr Gly Gln Leu Gly Asp Val Ile Lys Glu  
725 730 735

Ser Ala Gln Leu Ala Leu Thr Trp Val Arg Ala Arg Ala Ser Asp Phe  
740 745 750

Lys Leu Ala Leu Ala Gly Asp Met Asn Val Leu Asp Gly Arg Asp Ile  
755 760 765

His Ile His Phe Pro Ala Gly Ala Val Pro Lys Asp Gly Pro Ser Ala  
770 775 780

Gly Val Thr Leu Val Thr Ala Leu Val Ser Leu Phe Ser Gln Lys Arg  
785 790 795 800

Val Arg Ala Asp Thr Ala Met Thr Gly Glu Met Thr Leu Arg Gly Leu  
805 810 815

Val Leu Pro Val Gly Gly Ile Lys Asp Lys Ile Leu Ala Ala His Arg  
820 825 830

Tyr Gly Ile Lys Arg Val Ile Leu Pro Gln Arg Asn Ser Lys Asp Leu  
835 840 845

Val Glu Val Pro Ala Ala Val Leu Ser Ser Leu Glu Val Ile Leu Ala  
850 855 860

Lys Arg Met Glu Asp Val Leu Glu Asn Ala Phe Glu Gly Gly Cys Pro  
865 870 875 880

Trp Arg Asn Asn Tyr Ser Lys Leu  
885

<210> 1965

<211> 339

<212> DNA

<213> Arabidopsis thaliana

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ttgaatggat tgtttggaag acaatctgga acaactccag gatattctta ctctgctgct	180

aacaaaagca tggctgtgaa ttgggaggag aagactcttt acgattactt gttgaatcct 240  
 aagaagtaca tccctggaac aaaaatggtg ttctctggac tgaaaaaacc gcaagatcgt 300  
 gccgatctca tcgcttattt gaaggaaggt actgcttag 339

<210> 1966

<211> 112

<212> PRT

<213> Arabidopsis thaliana

<400> 1966

Met Ala Ser Phe Asp Glu Ala Pro Pro Gly Asn Pro Lys Ala Gly Glu  
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Lys Ile Phe Arg Thr Lys Cys Ala Gln Cys His Thr Val Glu Lys Gly  
 20 25 30

Ala Gly His Lys Gln Gly Pro Asn Leu Asn Gly Leu Phe Gly Arg Gln  
 35 40 45

Ser Gly Thr Thr Pro Gly Tyr Ser Tyr Ser Ala Ala Asn Lys Ser Met  
 50 55 60

Ala Val Asn Trp Glu Glu Lys Thr Leu Tyr Asp Tyr Leu Leu Asn Pro  
 65 70 75 80

Lys Lys Tyr Ile Pro Gly Thr Lys Met Val Phe Pro Gly Leu Lys Lys  
 85 90 95

Pro Gln Asp Arg Ala Asp Leu Ile Ala Tyr Leu Lys Glu Gly Thr Ala  
 100 105 110

<210> 1967

<211> 933

<212> DNA

<213> Arabidopsis thaliana

<400> 1967

atggtgtttg gaaaagggtc aaaccttgac agattccttc attgcacaac acctgtagtg 60  
 ccacccaat ctctatccaa ggcggagatt aggagtttga ataggatttg gcatccatgg 120  
 gagagacaaa aggttgagtt ttctcagattg agtgatctat gggattgtta tgatgaatgg 180

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agtgcttatg gagctggtgt tccaattcgt ctctctaatag gagaatctct tgttcaatat 240
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agggatgatt ctgaagatgg ggaagcaga gattcggtta gtgattcata tagtgatgag 360
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tatgtctcag ttctctcat ggataagatc aatgaattgg ctcaaaggta cccgggacta 540
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atttaccata ttccaatggg aaggaccatc aaagatttgt ccactgttt cctcacttat 660
cacactcttt catcttcttt ccaagatatg gagccagaag aaaatggcgg ggaaaaggag 720
aggatccgga aggaaggaga aggtgtaact ttgcttcctt ttgggttagc cacttataag 780
atgcaaggca atgtttggct ctcggaagac gatcaagtc aagatcaaga gcgagttctt 840
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aactacttct caagaatggc tcaccgtggc tga 933

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<210> 1968

<211> 310

<212> PRT

<213> *Arabidopsis thaliana*

<400> 1968

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Met Val Phe Gly Lys Gly Ser Asn Leu Asp Arg Phe Leu His Cys Thr
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20     25     30
Leu Asn Arg Ile Trp His Pro Trp Glu Arg Gln Lys Val Glu Phe Phe
35     40     45
Arg Leu Ser Asp Leu Trp Asp Cys Tyr Asp Glu Trp Ser Ala Tyr Gly
50     55     60
Ala Gly Val Pro Ile Arg Leu Ser Asn Gly Glu Ser Leu Val Gln Tyr
65     70     75     80
Tyr Val Pro Tyr Leu Ser Ala Ile Gln Ile Phe Thr Ser Arg Ser Ser
85     90     95

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047-E2F-PCT.ST25.txt

Leu Ile Arg Leu Arg Asp Asp Ser Glu Asp Gly Glu Ser Arg Asp Ser  
 100 105 110  
 Phe Ser Asp Ser Tyr Ser Asp Glu Ser Glu Ser Asp Lys Leu Ser Arg  
 115 120 125  
 Cys Ala Ser Asp Glu Gly Leu Glu His Asp Ala Leu Leu His Pro Asn  
 130 135 140  
 Asp Arg Leu Gly Tyr Leu Tyr Leu Gln Tyr Phe Glu Arg Ser Ala Pro  
 145 150 155 160  
 Tyr Ala Arg Val Pro Leu Met Asp Lys Ile Asn Glu Leu Ala Gln Arg  
 165 170 175  
 Tyr Pro Gly Leu Met Ser Leu Arg Ser Val Asp Leu Ser Pro Ala Ser  
 180 185 190  
 Trp Met Ala Val Ala Trp Tyr Pro Ile Tyr His Ile Pro Met Gly Arg  
 195 200 205  
 Thr Ile Lys Asp Leu Ser Thr Cys Phe Leu Thr Tyr His Thr Leu Ser  
 210 215 220  
 Ser Ser Phe Gln Asp Met Glu Pro Glu Glu Asn Gly Gly Glu Lys Glu  
 225 230 235 240  
 Arg Ile Arg Lys Glu Gly Glu Gly Val Thr Leu Leu Pro Phe Gly Leu  
 245 250 255  
 Ala Thr Tyr Lys Met Gln Gly Asn Val Trp Leu Ser Glu Asp Asp Gln  
 260 265 270  
 Gly Gln Asp Gln Glu Arg Val Leu Ser Leu Leu Ser Val Ala Asp Ser  
 275 280 285  
 Trp Leu Lys Gln Leu Arg Val Gln His His Asp Phe Asn Tyr Phe Ser  
 290 295 300  
 Arg Met Ala His Arg Gly  
 305 310

<210> 1969

<211> 828

<212> DNA



<213> *Arabidopsis thaliana*

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<400> 1969
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caaggacaag aaggaacaaa gttatgtagt tctggaacaa gtcgcgactg ccttaacttt    180
tgtttaattc gtggttatgc tgaagcagtc gcggatctca atttcagggtg tttgcgattc    240
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gttacgagaa acgcgacgaa gaaggagggt aaagatgcgt ttaggagatt ggcgattaag    360
tatcatccgg ataagcacgc tcagtctccg gagcatgttc gtcataacgc caccgtgcgg    420
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aacgctggtg gcgattctga ttgctttcgc cgtacgagcg gttcgatatag taatccgtat    540
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gcaatggaat caatcgagaa atcaaagtca cataaagatg aagggtga                828

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&lt;210&gt; 1970

&lt;211&gt; 275

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1970

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Met Thr Ser Leu Ile Ala Phe Leu Phe Thr Val Leu Val Ile Val Ser
1      5      10
Ser Val His Cys Arg Met Thr Thr Ala Ser Thr Pro Gly Tyr Gly Ile
20     25     30
Lys Gln Glu Asp Arg Leu Cys Ile Gln Gly Gln Glu Gly Thr Lys Leu
35     40     45
Cys Ser Ser Gly Thr Ser Arg Asp Cys Leu Asn Phe Cys Leu Ile Arg
50     55     60
Gly Tyr Ala Glu Ala Val Ala Asp Leu Asn Phe Arg Cys Leu Arg Phe
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65                      70                      75                      80  
 Arg Phe Arg Phe Asp Arg Leu Lys Phe Phe Pro Met Val Asp His Tyr  
                                  85                                   90                                   95  
 Gln Val Leu Gly Val Thr Arg Asn Ala Thr Lys Lys Glu Val Lys Asp  
                                  100                                   105                                   110  
 Ala Phe Arg Arg Leu Ala Ile Lys Tyr His Pro Asp Lys His Ala Gln  
                                  115                                   120                                   125  
 Ser Pro Glu His Val Arg His Asn Ala Thr Val Arg Phe Lys Leu Val  
                                  130                                   135                                   140  
 Ser Glu Ala Tyr Glu Val Leu Asn Asp Asp Leu Lys Arg Ala Ser Tyr  
                                  145                                   150                                   155                                   160  
 Asn Ala Gly Ser Asp Ser Asp Cys Phe Arg Arg Thr Ser Gly Ser Tyr  
                                  165                                   170                                   175  
 Ser Asn Pro Tyr Gly Asn Arg Gly Gly Arg Ala Gln Gly Ser Gly Tyr  
                                  180                                   185                                   190  
 Gly Tyr Gly Tyr Gly Tyr Ser Thr Arg Asn Arg Gln Ala Ser Ser Phe  
                                  195                                   200                                   205  
 Ser Ser Gly Phe Asp Ser Thr Phe Arg Tyr Leu Thr Thr Arg Ala Phe  
                                  210                                   215                                   220  
 Leu Leu Asn Leu Ala Leu Ala Gly Gly Leu Tyr Phe Ala Phe Thr Ala  
                                  225                                   230                                   235                                   240  
 Ile Asp Thr Ser Gly Glu Thr Leu Trp Lys Met Arg Asn Ser Gly Lys  
                                  245                                   250                                   255  
 Ser Phe Glu Glu Ala Met Glu Ser Ile Glu Lys Ser Lys Ser His Lys  
                                  260                                   265                                   270  
 Asp Glu Gly  
                                  275

&lt;210&gt; 1971

&lt;211&gt; 606

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

<400> 1971  
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 gtccgtgaga aggcggagga cattgataag aacatttcgc cgccgtcttc ttctcctcct 180  
 cctccttcgg ccgaagaagt taccaagaaa tatggccttg aagttggctt atggaagata 240  
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 gatgaggcta aagagtact tgcaaagtat ggtggtgctt atctcgctac atctattact 360  
 ctttctctca tttccttctc actctgctat gtccttgta cttccggtgt tgatgttcaa 420  
 gctcttcttc taaagggttg gatttcgacg aatgagacag gagagaaagt aggagccttt 480  
 gctttggctt acgcagcgca taaagctgca tctccgataa ggtttcgcc tacagtggct 540  
 ttgactccta ttgtagccaa ttggattggg aagaaagtg acaaggagaa ggatgatgac 600  
 aagtag 606

<210> 1972

<211> 201

<212> PRT

<213> Arabidopsis thaliana

<400> 1972

Met Ala Met Met Leu Leu Gln Ile Pro Pro Ser Ser Ser Leu Leu Asn  
 1 5 10 15

Thr Arg Asn Leu Gln Ile Arg Phe Phe His Ser Ser Val Ser Ala Ser  
 20 25 30

Ser Lys Lys Phe Arg Cys Arg Ala Val Arg Glu Lys Ala Glu Asp Ile  
 35 40 45

Asp Lys Asn Ile Ser Pro Pro Ser Ser Ser Pro Pro Pro Ser Ala  
 50 55 60

Glu Glu Val Thr Lys Lys Tyr Gly Leu Glu Val Gly Leu Trp Lys Ile  
 65 70 75 80

Leu Ser Ser Lys Asp Asp Glu Gly Ser Asp Gly Asp Asn Lys Lys Lys  
 85 90 95

Lys Ser Lys Thr Asp Glu Ala Lys Glu Leu Leu Ala Lys Tyr Gly Gly  
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Ala Tyr Leu Ala Thr Ser Ile Thr Leu Ser Leu Ile Ser Phe Ser Leu  
115 120 125

Cys Tyr Val Leu Val Thr Ser Gly Val Asp Val Gln Ala Leu Leu Leu  
130 135 140

Lys Val Gly Ile Ser Thr Asn Glu Thr Gly Glu Lys Val Gly Ala Phe  
145 150 155 160

Ala Leu Ala Tyr Ala Ala His Lys Ala Ala Ser Pro Ile Arg Phe Pro  
165 170 175

Pro Thr Val Ala Leu Thr Pro Ile Val Ala Asn Trp Ile Gly Lys Lys  
180 185 190

Val Asp Lys Glu Lys Asp Asp Asp Lys  
195 200

<210> 1973

<211> 645

<212> DNA

<213> Arabidopsis thaliana

<400> 1973

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ccttctcttc gatcattatc tcgccatttc aatcccaatt tcaatcatag aatcatccca	120
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cttgattaca aaacagtgat ggggcagatt catgccattc agtctgatgg taacgttgtt	420
aagggtgtgg aggcatttag gagattgtat gaagaagttg ggcttgatg ggtttacact	480
atcaccacaa ttgaaccaat agggaagtta gcagatgttg tgtatgatgt atgggctaaa	540
taccgacttc aagtcacagg gaggccatct atagaagcta ttctgaagc aagaagaaaa	600
gataaggtag agacatgtgg tgaaagcaag aactgcaaga tatga	645

<210> 1974

&lt;211&gt; 214

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1974

Met Ala Thr Arg Gly Ala Val Ala Ala Ala Ala Ser Thr Ile Trp Lys  
 1 5 10 15

His Arg Arg Asn Pro Ser Leu Arg Ser Leu Ser Arg His Phe Asn Pro  
 20 25 30

Asn Phe Asn His Arg Ile Ile Pro Thr Gly Phe Lys Tyr Gln Val Arg  
 35 40 45

Ala Ile Gln Gly Thr Ser Thr Asp Pro Val Ile Thr Pro Leu Lys Asn  
 50 55 60

Arg Glu Glu Pro Lys Pro Gln Asn Trp Lys Ile Lys Met Leu Tyr Asp  
 65 70 75 80

Gly Asp Cys Pro Leu Cys Met Arg Glu Val Asn Met Leu Met Glu Arg  
 85 90 95

Asn Glu Lys His Gly Thr Ile Lys Phe Val Asp Ile Ser Ser Asn Asp  
 100 105 110

Tyr Ser Pro Glu Asp Asn Gln Gly Leu Asp Tyr Lys Thr Val Met Gly  
 115 120 125

Gln Ile His Ala Ile Gln Ser Asp Gly Asn Val Val Lys Gly Val Glu  
 130 135 140

Ala Phe Arg Arg Leu Tyr Glu Glu Val Gly Leu Gly Trp Val Tyr Thr  
 145 150 155 160

Ile Thr Lys Phe Glu Pro Ile Gly Lys Leu Ala Asp Val Val Tyr Asp  
 165 170 175

Val Trp Ala Lys Tyr Arg Leu Gln Val Thr Gly Arg Pro Ser Ile Glu  
 180 185 190

Ala Ile Leu Glu Ala Arg Lys Lys Asp Lys Val Glu Thr Cys Gly Glu  
 195 200 205

Ser Lys Asn Cys Lys Ile

210

&lt;210&gt; 1975

&lt;211&gt; 1269

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 1975

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cagagactaa acaaaggtaa gaagaagcag ataccaactt ggagtctctc ttttgtaagg	180
aaccgaagta gaagaattgg tgttgtgtct tcaagcttag tagcaagtcc ttctggagag	240
atagctcttt catctgaaga gaaggtttac aatgttgtgt tgaacaacgc tgccttggtg	300
aacaaacagc taaggctctc tcttatgac ctgatgtga agaaaccaca agatgttgtt	360
cttcctggga gtttgagttt gttgggtgaa gcttatgac gatgcggtga agtttgcgct	420
gaatatgcta agacgtttta tcttggaact ttgcttatga caccgaaag gcgaaaggcg	480
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tcacatataa ctcccatggc tttagataga tgggaagcaa ggtagaaga tcttttccgt	600
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gatattcagc catttcgaga catgatcgaa ggaatgagaa tggacttgaa gaaatcgaga	720
taccagaact tcgatgatct atacctttac tgctactacg tcgctggaac cgctcgattg	780
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aacgctgcct tggcccttgg tatagccaat cagcttacta acatactcag agacgtaggc	900
gaagatgcga gaagaggaag ggtttatctg cctcaggatg aattggctca ggctggctct	960
tcagatgaag acatattcgc cggaaggata actgataaat ggagaaactt catgaaaatg	1020
cagcttaaac gagcaagaat gttcttcgac gaagctgaga aaggcgctcac cgagctcagt	1080
gccgctagca gatggcctgt atgggcttca ttgctattgt acaggagaat actggacgag	1140
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&lt;210&gt; 1976

&lt;211&gt; 422

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 1976

Met Ser Ser Ser Val Ala Val Leu Trp Val Ala Thr Ser Ser Leu Asn  
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Pro Asp Pro Met Asn Asn Cys Gly Leu Val Arg Val Leu Glu Ser Ser  
 20 25 30

Arg Leu Phe Ser Pro Cys Gln Asn Gln Arg Leu Asn Lys Gly Lys Lys  
 35 40 45

Lys Gln Ile Pro Thr Trp Ser Ser Ser Phe Val Arg Asn Arg Ser Arg  
 50 55 60

Arg Ile Gly Val Val Ser Ser Ser Leu Val Ala Ser Pro Ser Gly Glu  
 65 70 75 80

Ile Ala Leu Ser Ser Glu Glu Lys Val Tyr Asn Val Val Leu Lys Gln  
 85 90 95

Ala Ala Leu Val Asn Lys Gln Leu Arg Ser Ser Ser Tyr Asp Leu Asp  
 100 105 110

Val Lys Lys Pro Gln Asp Val Val Leu Pro Gly Ser Leu Ser Leu Leu  
 115 120 125

Gly Glu Ala Tyr Asp Arg Cys Gly Glu Val Cys Ala Glu Tyr Ala Lys  
 130 135 140

Thr Phe Tyr Leu Gly Thr Leu Leu Met Thr Pro Glu Arg Arg Lys Ala  
 145 150 155 160

Ile Trp Ala Ile Tyr Val Trp Cys Arg Arg Thr Asp Glu Leu Val Asp  
 165 170 175

Gly Pro Asn Ala Ser His Ile Thr Pro Met Ala Leu Asp Arg Thr Glu  
 180 185 190

Ala Arg Leu Glu Asp Leu Phe Arg Gly Arg Pro Phe Asp Met Leu Asp  
 195 200 205

Ala Ala Leu Ala Asp Thr Val Ala Arg Tyr Pro Val Asp Ile Gln Pro  
 210 215 220

047-E2F-PCT.ST25.txt

Phe Arg Asp Met Ile Glu Gly Met Arg Met Asp Leu Lys Lys Ser Arg  
 225 230 235 240  
 Tyr Gln Asn Phe Asp Asp Leu Tyr Leu Tyr Cys Tyr Tyr Val Ala Gly  
 245 250 255  
 Thr Val Gly Leu Met Ser Val Pro Val Met Gly Ile Asp Pro Lys Ser  
 260 265 270  
 Lys Ala Thr Thr Glu Ser Val Tyr Asn Ala Ala Leu Ala Leu Gly Ile  
 275 280 285  
 Ala Asn Gln Leu Thr Asn Ile Leu Arg Asp Val Gly Glu Asp Ala Arg  
 290 295 300  
 Arg Gly Arg Val Tyr Leu Pro Gln Asp Glu Leu Ala Gln Ala Gly Leu  
 305 310 315 320  
 Ser Asp Glu Asp Ile Phe Ala Gly Lys Val Thr Asp Lys Trp Arg Asn  
 325 330 335  
 Phe Met Lys Met Gln Leu Lys Arg Ala Arg Met Phe Phe Asp Glu Ala  
 340 345 350  
 Glu Lys Gly Val Thr Glu Leu Ser Ala Ala Ser Arg Trp Pro Val Trp  
 355 360 365  
 Ala Ser Leu Leu Leu Tyr Arg Arg Ile Leu Asp Glu Ile Glu Ala Asn  
 370 375 380  
 Asp Tyr Asn Asn Phe Thr Lys Arg Ala Tyr Val Gly Lys Val Lys Lys  
 385 390 395 400  
 Ile Ala Ala Leu Pro Leu Ala Tyr Ala Lys Ser Val Leu Lys Thr Ser  
 405 410 415  
 Ser Ser Arg Leu Ser Ile  
 420

<210> 1977

<211> 1209

<212> DNA

<213> Arabidopsis thaliana



## 047-E2F-PCT.ST25.txt

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tctcacctca acgaatcatt cgattccgat tgtagcaagg agaatcagtt tccgatttcg    180
gtttctctct cgtcccaatc ctcaagtctg atcaccgaag ctccgtcagc aaaatccaag    240
accgtgaaga ccaaatccgc cgcagatcgg agtaaaaagc gagatatcga tgcagagatc    300
gaagaagtag agaaggagat cggacgatta tcgacgaaat tggagtcgct ccgattagag    360
aaggcggagc aaaccgcaag aagcattgct atacgtggaa gaatcggtcc ggcgaagttc    420
atggaatcat ctcaagaaca agtgaaattc gacgattcgt gttttacagg atcgaaatca    480
agagccactc gtgaggcggt tagtcttggg ccagcggaga tattcaattc cgcgaagaaa    540
tctgaaactg tgactcctct tcaatcagct cagaatcgac gcaagtcttg tttctttaag    600
cttcctggaa tcgaagaagg tcaagtgcgc acacgaggtg aaggaagaac gagtttgagt    660
ctgagtcgga gatctcgcaa agcgaaaatg acggcagctc agaagcaagc agctacgacg    720
gtggggtcaa agagagctgt gaagaaagaa gaaggagttc tcttaacaat ccagcctaag    780
aggctattca aagaagatga aaagaatggt tctttaagga aaccattgaa accaggaaga    840
gttgtggcta gtaggtagac tcaaatgggt aaaacgcaga ctggagagaa agatgttagg    900
aaaaggctgt tgcctgagga tgaagagaaa gagaatcata agaggtcgga gaagagaaga    960
gcttctgatg aaagtaacaa gagtgaaggg agagtgaaga agagatggga gattccaagt   1020
gaagttgatc tgtatagcag tggtagaagc ggtgacgagt ctccatatagt taaggagcta   1080
cctaagatca gaacgcttcg tcgtgtggga gggagccctc gtgattcagg tgctgctaag   1140
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gaagaatga                                     1209

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<210> 1978

<211> 402

<212> PRT

<213> *Arabidopsis thaliana*

<400> 1978

Met Thr Ser Ile Glu Ala Thr Glu Thr Leu Asn Ala Pro Pro Lys Leu  
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Gln Ile Trp Asn Asn Ala Ala Phe Asp Asp Gly Asp Ser Gln Ile Thr  
20 25 30

047-E2F-PCT.ST25.txt

Ser Ala Ile Glu Ala Ser Ser Trp Ser His Leu Asn Glu Ser Phe Asp  
35 40 45

Ser Asp Cys Ser Lys Glu Asn Gln Phe Pro Ile Ser Val Ser Ser Ser  
50 55 60

Leu Gln Ser Ser Val Ser Ile Thr Glu Ala Pro Ser Ala Lys Ser Lys  
65 70 75 80

Thr Val Lys Thr Lys Ser Ala Ala Asp Arg Ser Lys Lys Arg Asp Ile  
85 90 95

Asp Ala Glu Ile Glu Glu Val Glu Lys Glu Ile Gly Arg Leu Ser Thr  
100 105 110

Lys Leu Glu Ser Leu Arg Leu Glu Lys Ala Glu Gln Thr Ala Arg Ser  
115 120 125

Ile Ala Ile Arg Gly Arg Ile Val Pro Ala Lys Phe Met Glu Ser Ser  
130 135 140

Gln Lys Gln Val Lys Phe Asp Asp Ser Cys Phe Thr Gly Ser Lys Ser  
145 150 155 160

Arg Ala Thr Arg Arg Gly Val Ser Leu Gly Pro Ala Glu Ile Phe Asn  
165 170 175

Ser Ala Lys Lys Ser Glu Thr Val Thr Pro Leu Gln Ser Ala Gln Asn  
180 185 190

Arg Arg Lys Ser Cys Phe Phe Lys Leu Pro Gly Ile Glu Glu Gly Gln  
195 200 205

Val Thr Thr Arg Gly Lys Gly Arg Thr Ser Leu Ser Leu Ser Pro Arg  
210 215 220

Ser Arg Lys Ala Lys Met Thr Ala Ala Gln Lys Gln Ala Ala Thr Thr  
225 230 235 240

Val Gly Ser Lys Arg Ala Val Lys Lys Glu Glu Gly Val Leu Leu Thr  
245 250 255

Ile Gln Pro Lys Arg Leu Phe Lys Glu Asp Glu Lys Asn Val Ser Leu  
260 265 270

Arg Lys Pro Leu Lys Pro Gly Arg Val Val Ala Ser Arg Tyr Ser Gln  
275 280 285

047-E2F-PCT.ST25.txt

Met Gly Lys Thr Gln Thr Gly Glu Lys Asp Val Arg Lys Arg Ser Leu  
290 295 300

Pro Glu Asp Glu Glu Lys Glu Asn His Lys Arg Ser Glu Lys Arg Arg  
305 310 315 320

Ala Ser Asp Glu Ser Asn Lys Ser Glu Gly Arg Val Lys Lys Arg Trp  
325 330 335

Glu Ile Pro Ser Glu Val Asp Leu Tyr Ser Ser Gly Glu Asn Gly Asp  
340 345 350

Glu Ser Pro Ile Val Lys Glu Leu Pro Lys Ile Arg Thr Leu Arg Arg  
355 360 365

Val Gly Gly Ser Pro Arg Asp Ser Gly Ala Ala Lys Arg Val Ala Glu  
370 375 380

Leu Gln Ala Lys Asp Arg Asn Phe Thr Phe Cys Gln Leu Leu Lys Phe  
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Glu Glu

<210> 1979

<211> 1110

<212> DNA

<213> Arabidopsis thaliana

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gtctctaacg ttccatcatc agctccttct ccgcataaac aacaactcga gccgtccgat 180  
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tttttatcca agacattgtc acgagaaaga agagcagatg atgattataa taaacttgtg 300  
ccttattttg tgcttggtga tatatgggac tcatttcgag agtgaggatgc ttacggcacc 360  
ggtgtgcctc ttgttttgaa taacaacaag gatcgtgtta tccaatacta tgccccctct 420  
ttgtcagcca ttcaaatcta tgctcattct catgccttgg attcatctct taaatcaagg 480  
cgctcgtggtg atagtagcga cagtgatttt cgggattcaa gtagcgatgt tagcagcgat 540

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agtgattccg agcgggtttc tgctagagta gactgtatct cattgagggg tcaacatcag      600
gaagactctt ccagtgatga tggcgaacct ttaggctctc aaggctgttt gatgtttgag      660
tatcttgaaa gagaccttcc atacatccgt gaaccttttg ctgataaggt cttggacctc      720
gcagctcagt tccccgagct aatgacgctg agaagctgtg acttactctg gtcaagctgg      780
ttttctgttg catggtaccc aatttacaga ataccacag gaccgacct gaaggacctg      840
gatgcttggt tcttgacgta tcattcccta cacacatctt ttggagggtga aggcagtgaa      900
caatcaatga gccttacgca accaaggagg agcgagaaga tgcattgcc tgtgtttggg      960
cttgcttcac acaagttcag aggttcatta tggacaccca ttgggggttc ggagcaccag    1020
ctcgtgaact ctctgttcca agccgctgac aaatggctgc attctgtca tgtcagccac    1080
cctgatttcc tcttcttctg ccgtcgttga                                     1110

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&lt;210&gt; 1980

&lt;211&gt; 369

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1980

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Met Leu Gly Ala Gly Phe Gln Leu Thr Arg Gly Arg His Gly Asp Asp
1      5      10

```

```

Pro Phe Tyr Thr Ser Ala Lys Thr Arg Arg Ala Asn Gln Arg Ile Asp
      20      25      30

```

```

Gln Leu Arg Arg Ala Gln Ser Asp Val Ser Asn Val Pro Ser Ser Ala
      35      40      45

```

```

Pro Ser Pro His Lys Gln Gln Leu Glu Pro Ser Asp Leu Ser Ser Ser
      50      55      60

```

```

Asn Leu Asp Arg Phe Leu Glu Ser Val Thr Pro Ser Val Pro Ala Gln
      65      70      75      80

```

```

Phe Leu Ser Lys Thr Leu Leu Arg Glu Arg Arg Ala Asp Asp Asp Tyr
      85      90      95

```

```

Asn Lys Leu Val Pro Tyr Phe Val Leu Gly Asp Ile Trp Asp Ser Phe
      100      105      110

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```

Ala Glu Trp Ser Ala Tyr Gly Thr Gly Val Pro Leu Val Leu Asn Asn
      115      120      125

```

047-E2F-PCT.ST25.txt

Asn Lys Asp Arg Val Ile Gln Tyr Tyr Val Pro Ser Leu Ser Ala Ile  
 130 135 140  
 Gln Ile Tyr Ala His Ser His Ala Leu Asp Ser Ser Leu Lys Ser Arg  
 145 150 155 160  
 Arg Pro Gly Asp Ser Ser Asp Ser Asp Phe Arg Asp Ser Ser Ser Asp  
 165 170 175  
 Val Ser Ser Asp Ser Asp Ser Glu Arg Val Ser Ala Arg Val Asp Cys  
 180 185 190  
 Ile Ser Leu Arg Asp Gln His Gln Glu Asp Ser Ser Ser Asp Asp Gly  
 195 200 205  
 Glu Pro Leu Gly Ser Gln Gly Arg Leu Met Phe Glu Tyr Leu Glu Arg  
 210 215 220  
 Asp Leu Pro Tyr Ile Arg Glu Pro Phe Ala Asp Lys Val Leu Asp Leu  
 225 230 235 240  
 Ala Ala Gln Phe Pro Glu Leu Met Thr Leu Arg Ser Cys Asp Leu Leu  
 245 250 255  
 Arg Ser Ser Trp Phe Ser Val Ala Trp Tyr Pro Ile Tyr Arg Ile Pro  
 260 265 270  
 Thr Gly Pro Thr Leu Lys Asp Leu Asp Ala Cys Phe Leu Thr Tyr His  
 275 280 285  
 Ser Leu His Thr Ser Phe Gly Gly Glu Gly Ser Glu Gln Ser Met Ser  
 290 295 300  
 Leu Thr Gln Pro Arg Glu Ser Glu Lys Met Ser Leu Pro Val Phe Gly  
 305 310 315 320  
 Leu Ala Ser Tyr Lys Phe Arg Gly Ser Leu Trp Thr Pro Ile Gly Gly  
 325 330 335  
 Ser Glu His Gln Leu Val Asn Ser Leu Phe Gln Ala Ala Asp Lys Trp  
 340 345 350  
 Leu His Ser Cys His Val Ser His Pro Asp Phe Leu Phe Phe Cys Arg  
 355 360 365

Arg

<210> 1981  
 <211> 897  
 <212> DNA  
 <213> *Arabidopsis thaliana*

<400> 1981  
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 actgattggg caaaggagaa gatcggctct aagcacgaag acaacatcca acccactcac 180  
 accaccacga cgtttcaaga cgacgcttgg agagcgagtc aaaaagccga ggacgcaaag 240  
 gaggcggcta aacgcaaagc agaggaagcg gttggagccg cgaaggagaa agcgggttcg 300  
 gcatacgaga cagctaaatc gaaagttgag gagggtttgg cttctgtaaa agacaaggcc 360  
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 gttaaagata gcttgtcggg agacgaaaac gatgagtctt ggaccggttg ggccaaagag 480  
 aaaatcgaa tcaagaacga agacatcaac agccctaact tgggagagac ggtatctgag 540  
 aaggcaaaag aagctaagga agcggctaaa cgcaaagcag gagatgctaa agagaagttg 600  
 gcggagacag ttgagacggc gaaagagaag gcgagcgata tgacgagtgc agctaaggag 660  
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 aaagaagtt atgagactgc aaaatcaaaa gccgatgaga ctttagagtc cgcgaaagat 780  
 aaggcgtcgc agagttacga ctacgctcgc cgtaaatcgg aggaagctaa agataccgtg 840  
 tctcacaagt caaacgtgt taaagagagc ttgaccgacg atgatgctga gctctga 897

<210> 1982  
 <211> 298  
 <212> PRT  
 <213> *Arabidopsis thaliana*

<400> 1982  
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 Leu Met Ala Ile Ala Thr Met Cys Cys Val Gln Ala Thr Ile Glu Glu  
 20 25 30

Glu Ala Ala Lys Asp Glu Ser Trp Thr Asp Trp Ala Lys Glu Lys Ile  
           35                  40                  45  
 Gly Leu Lys His Glu Asp Asn Ile Gln Pro Thr His Thr Thr Thr Thr  
           50                  55                  60  
 Val Gln Asp Asp Ala Trp Arg Ala Ser Gln Lys Ala Glu Asp Ala Lys  
           65                  70                  75                  80  
 Glu Ala Ala Lys Arg Lys Ala Glu Glu Ala Val Gly Ala Ala Lys Glu  
                   85                  90                  95  
 Lys Ala Gly Ser Ala Tyr Glu Thr Ala Lys Ser Lys Val Glu Glu Gly  
                   100                  105                  110  
 Leu Ala Ser Val Lys Asp Lys Ala Ser Gln Ser Tyr Asp Ser Ala Gly  
                   115                  120                  125  
 Gln Val Lys Asp Asp Val Ser His Lys Ser Lys Gln Val Lys Asp Ser  
                   130                  135                  140  
 Leu Ser Gly Asp Glu Asn Asp Glu Ser Trp Thr Gly Trp Ala Lys Glu  
           145                  150                  155                  160  
 Lys Ile Gly Ile Lys Asn Glu Asp Ile Asn Ser Pro Asn Leu Gly Glu  
                   165                  170  
 Thr Val Ser Glu Lys Ala Lys Glu Ala Lys Glu Ala Ala Lys Arg Lys  
                   180                  185                  190  
 Ala Gly Asp Ala Lys Glu Lys Leu Ala Glu Thr Val Glu Thr Ala Lys  
                   195                  200                  205  
 Glu Lys Ala Ser Asp Met Thr Ser Ala Ala Lys Glu Lys Ala Glu Lys  
           210                  215                  220  
 Leu Lys Glu Glu Ala Glu Arg Glu Ser Lys Ser Ala Lys Glu Lys Ile  
           225                  230                  235                  240  
 Lys Glu Ser Tyr Glu Thr Ala Lys Ser Lys Ala Asp Glu Thr Leu Glu  
                   245                  250                  255  
 Ser Ala Lys Asp Lys Ala Ser Gln Ser Tyr Asp Ser Ala Ala Arg Lys  
                   260                  265                  270  
 Ser Glu Glu Ala Lys Asp Thr Val Ser His Lys Ser Lys Arg Val Lys  
   280                  285                  290  
   Page 2897

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047-E2F-PCT.ST25.txt  
280 285Glu Ser Leu Thr Asp Asp Asp Ala Glu Leu  
290 295

&lt;210&gt; 1983

&lt;211&gt; 654

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1983

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gtcaccaccg gtgaagaaga cgaagacacc atcctcgatc tgaatcgaa gttgtatcga	180
tttgataaag atggaagtca gtggaaggag agaggtgctg gtactgttaa gttttgaaa	240
catagagttt ctgggaagat tcgtctcggt atgaggcaat cgaaaacttt gaagatctgt	300
gctaatacat ttgttggatc gggatatgag gtccaggaac acgctgggaa tgataagtct	360
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cggtttgctt cagttgagaa ttgcaaagca tttatgcaa agttcaagga agtagctgaa	480
tctgaagaag agaaagaaga gagcaaagat gcctctgata ccgctggtct tcttgagaag	540
ttaacagtgg aagagaagga aagtgagaag aaaccagtgg agaaggcaga ggaaaaacaaa	600
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&lt;210&gt; 1984

&lt;211&gt; 217

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1984

Met Ala Ser Ile Ser Asn Glu Pro Glu Arg Glu Asn Arg Asp Glu Glu  
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20 25 30Ile Val Arg Leu Glu Glu Val Ala Val Thr Thr Gly Glu Glu Asp Glu  
35 40 45



047-E2F-PCT.ST25.txt

Asp Thr Ile Leu Asp Leu Lys Ser Lys Leu Tyr Arg Phe Asp Lys Asp  
50 55 60

Gly Ser Gln Trp Lys Glu Arg Gly Ala Gly Thr Val Lys Phe Leu Lys  
65 70 75 80

His Arg Val Ser Gly Lys Ile Arg Leu Val Met Arg Gln Ser Lys Thr  
85 90 95

Leu Lys Ile Cys Ala Asn His Leu Val Gly Ser Gly Met Ser Val Gln  
100 105 110

Glu His Ala Gly Asn Asp Lys Ser Cys Val Trp His Ala Arg Asp Phe  
115 120 125

Ser Asp Gly Glu Leu Lys Asp Glu Leu Phe Cys Ile Arg Phe Ala Ser  
130 135 140

Val Glu Asn Cys Lys Ala Phe Met Gln Lys Phe Lys Glu Val Ala Glu  
145 150 155 160

Ser Glu Glu Glu Lys Glu Glu Ser Lys Asp Ala Ser Asp Thr Ala Gly  
165 170 175

Leu Leu Glu Lys Leu Thr Val Glu Glu Lys Glu Ser Glu Lys Lys Pro  
180 185 190

Val Glu Lys Ala Glu Glu Asn Lys Lys Ser Glu Ala Val Glu Glu Lys  
195 200 205

Lys Thr Glu Glu Ser Val Pro Ser Ala  
210 215

<210> 1985

<211> 2352

<212> DNA

<213> Arabidopsis thaliana

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attacaagga gaaagagaca tcttttactg agtggttcaat cagtcttgca caatacaaga 180

cccaacatca	acgacaatgg	ctcagctgag	tctgcaaatg	ttcttttcga	taaattattt	240
gctcggacac	acagattgga	gagacaaacc	aatcaacact	cggtttatcc	tgacgatgat	300
gatctccctt	attcaaacct	tggcgtgctt	gagtctgacc	ttgaggctgc	gctagtggcc	360
ttgttgaaaa	gggaagagga	cctgcacgat	gctgagagga	agcttctctc	tgacaaaaat	420
aaacttaacc	gggcaaggga	ggagttagaa	aaacgtgaga	aaacaatctc	tgaagcttcg	480
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<210> 1986

<211> 783

<212> PRT

<213> Arabidopsis thaliana

<400> 1986

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Leu Leu Ser Val Gln Ser Val Leu His Asn Thr Arg Pro Asn Ile Asn  
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Asp Asn Gly Ser Ala Glu Ser Ala Asn Val Leu Phe Asp Lys Leu Phe  
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Ala Arg Thr His Arg Leu Glu Arg Gln Thr Asn Gln His Ser Val Tyr  
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Pro Asp Asp Asp Asp Leu Pro Tyr Ser Asn Leu Gly Val Leu Glu Ser  
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Asp Leu Glu Ala Ala Leu Val Ala Leu Leu Lys Arg Glu Glu Asp Leu  
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 Glu Glu Glu Leu Glu Lys Met Arg Gln Glu Ile Ala Asn Arg Ser Lys  
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 Glu Val Ser Met Ala Ile Ser Glu Phe Glu Ser Lys Ser Gln Leu Leu  
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 405 410 415

Asp Leu Arg Glu Glu Leu Gln Lys Glu Lys Pro Leu Leu Glu Leu Ala  
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 595 600 605  
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Leu Ala Gln Glu Arg Val Gly Glu Lys Thr Met Gly Asp Leu Ala Ile  
675 680 685

Glu Met Leu Gln Leu Glu Ala Ala Asn Leu Glu Val Glu Ala Ala Thr  
690 695 700

Ser Ala Leu Gln Lys Leu Ala Lys Met Ser Thr Glu Leu Leu Thr Gln  
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Ala Asp Met Ser Ile Glu Ala Asp Thr Thr His Thr Val Met Pro Glu  
725 730 735

Arg Gly Tyr Ser Glu Gly Ser Asn Glu Cys Leu Gly Glu Val Lys Thr  
740 745 750

Glu Val Val Arg Leu Trp Ser Leu Thr Glu Lys Leu Leu Glu Asn Ala  
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<210> 1987

<211> 912

<212> DNA

<213> Arabidopsis thaliana

<400> 1987

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<210> 1988

<211> 303

<212> PRT

<213> Arabidopsis thaliana

<400> 1988

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 35 40 45

Glu Asp Ser Thr Pro Glu Val Leu Thr Ile Asn His Ile Pro Leu Asp  
 50 55 60

Pro Asp Thr Leu Leu Glu Ile Asn Gly Val Arg Met Gly Met Tyr Ser  
 65 70 75 80

Glu Gly Gly Ser Ser Gln Leu Arg Arg Asp Arg Val Asp Lys Lys Ser  
 85 90 95

Glu Glu Ala Thr Tyr Val Ser Thr Asp Asn Ile Arg Leu Thr Gly Ser  
 100 105 110

Val Lys Phe Glu Val Tyr Asp Lys Asn Glu Leu Val Leu Ser Gly Thr  
 115 120 125

Leu Glu Met Ser Gly Ser Asn Gly Phe Thr Gly Glu Ser Lys Asn Arg  
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Trp Lys Met Asn Cys Glu Ala Glu Val Thr Ala Gly Ser Gly Phe Leu  
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Lys Glu Lys Ser Ile Asn Gly Gln Glu Leu Ser Ser Pro Leu Pro Thr  
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Ile Glu Val Tyr Val Thr Gly Cys Phe Ser Gly Thr Pro Ile Ile Leu  
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Thr Lys Thr Leu Gln Leu Gly Leu Lys Lys Lys Gln Ser Arg Arg Met  
195 200 205

Ala Leu Asp Ala Ile Pro Glu Tyr Glu Thr Ala Glu Pro Gln Lys Asp  
210 215 220

Thr Ser Tyr Ala Leu Asp Leu Gln Ala Thr Thr Glu Tyr Gly Asn Tyr  
225 230 235 240

Lys Glu Glu Tyr Glu Gly Asp Met Tyr Trp Arg Ser Glu Cys Ile Asp  
245 250 255

Gly Glu Met Ser Trp Phe Asn Ala Gly Val Arg Val Gly Val Gly Ile  
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<210> 1989

<211> 3132

<212> DNA

<213> Arabidopsis thaliana

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<210> 1990

<211> 1043

<212> PRT

<213> *Arabidopsis thaliana*

<400> 1990

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Val Ala Thr Arg Ser Pro Gln Glu Arg Asn Thr Arg Leu Glu Asn Met  
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Cys Trp Arg Ile Trp Asn Leu Ala Arg Gln Lys Lys Gln His Glu Glu  
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 Gly Gly Gln Val Lys Tyr Val Val Glu Leu Ala Arg Ala Leu Gly Ser  
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 305 310 315 320  
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 Page 2909

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Asn Glu Lys Lys Ala Asp Asn Asp Glu Gln Ile Val Thr Leu Ala Glu  
885 890 895

His Leu Ser Thr Asp Tyr Cys Tyr Thr Phe Thr Val Lys Lys Pro Ala  
900 905 910

Ala Val Pro Pro Val Arg Glu Leu Arg Lys Leu Leu Arg Ile Gln Ala  
915 920 925

Leu Arg Cys His Val Val Tyr Ser Gln Asn Gly Thr Arg Ile Asn Val  
930 935 940

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Arg Trp Gly Ile Asp Met Ala Lys Met Ala Val Phe Val Gly Glu Ser  
965 970 975

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980 985 990

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995 1000 1005

Tyr Pro Leu Thr Asp Val Ile Ser Phe Glu Ser Asn Asn Val Val  
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<211> 213

<212> DNA

<213> Arabidopsis thaliana

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<210> 1992  
 <211> 70  
 <212> PRT  
 <213> Arabidopsis thaliana

<400> 1992  
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 35 40 45  
 Asn Gln Gln Ile Met Ile Thr Ile Ala Leu Ile Cys Leu Cys Ser Val  
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 Phe Thr Leu Phe Pro Val  
 65 70

<210> 1993  
 <211> 768  
 <212> DNA  
 <213> Arabidopsis thaliana

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 tctaactcca ctccaatgac taatggtggg tatatgaacg gaaaagcgaa aaccaatggt 240  
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gattcaaaag acatagtgga acttgaacta aagcagctcg actgtgagat cgttattcga 360  
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 ctgatgaacg agattgaggc tgagaagtca ggaaccatca tggaactact ggctgaagat 720  
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<210> 1994

<211> 255

<212> PRT

<213> Arabidopsis thaliana

<400> 1994

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Arg Val Gly Ser Leu Pro Gly Ile Ser Thr Gln Arg Trp Gln Pro Gln  
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Pro Asn Gly Ile Ser Phe Pro Ser Asp Val Ser Gln Asn His Ser Ala  
 35 40 45

Phe Trp Arg Leu Arg Ala Thr Thr Asn Glu Val Val Ser Asn Ser Thr  
 50 55 60

Pro Met Thr Asn Gly Gly Tyr Met Asn Gly Lys Ala Lys Thr Asn Val  
 65 70 75 80

Pro Glu Pro Ala Glu Leu Ser Glu Phe Met Ala Lys Val Ser Gly Leu  
 85 90 95

Leu Lys Leu Val Asp Ser Lys Asp Ile Val Glu Leu Glu Leu Lys Gln  
 100 105 110

Leu Asp Cys Glu Ile Val Ile Arg Lys Lys Glu Ala Leu Gln Gln Ala  
 115 120 125

Val Pro Pro Ala Pro Val Tyr His Ser Met Pro Pro Val Met Ala Asp  
 130 135 140



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Phe Ser Met Pro Pro Ala Gln Pro Val Ala Leu Pro Pro Ser Pro Thr  
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 Pro Thr Ser Thr Pro Ala Thr Ala Lys Pro Thr Ser Ala Pro Ser Ser  
 165 170 175  
 Ser His Pro Pro Leu Lys Ser Pro Met Ala Gly Thr Phe Tyr Arg Ser  
 180 185 190  
 Pro Gly Pro Gly Glu Pro Pro Phe Val Lys Val Gly Asp Lys Val Gln  
 195 200 205  
 Lys Gly Gln Ile Val Cys Ile Ile Glu Ala Met Lys Leu Met Asn Glu  
 210 215 220  
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 225 230 235 240  
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<210> 1995

<211> 822

<212> DNA

<213> Arabidopsis thaliana

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<210> 1996

<211> 273

<212> PRT

<213> Arabidopsis thaliana

<400> 1996

Met Ala Phe Leu<sub>5</sub> Leu Ser Asn Leu Ser<sub>10</sub> Pro Ser Ile His<sub>15</sub> Gln  
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 Ser Ser<sub>35</sub> Ser Val Ser Tyr Glu<sub>40</sub> Phe Val Glu Glu<sub>45</sub> Asn Leu Ser Thr  
 Leu Ser<sub>50</sub> Leu Leu Ser Ile<sub>55</sub> Gln Ser Pro Pro Leu Lys<sub>60</sub> Asp Thr Gln Val  
 Gln Thr Arg His Ser<sub>70</sub> Gln Asp Lys His<sub>75</sub> Asn Asn His Asp Arg Asp<sub>80</sub>  
 Glu Phe Tyr Ile<sub>85</sub> Asn Leu Gly Val Ala<sub>90</sub> Val Arg Thr Leu Arg Glu<sub>95</sub> Asp  
 Leu Pro Leu Leu<sub>100</sub> Phe Thr Arg Asp Leu<sub>105</sub> Asn Tyr Asp Ile Tyr Arg Asp  
 Asp Ile Thr Phe Val Asp Pro Met<sub>120</sub> Asn Thr Phe Thr Gly<sub>125</sub> Met Asp Asn  
 Tyr Lys Ile Ile Phe Trp Ala<sub>135</sub> Leu Arg Phe His Gly<sub>140</sub> Lys Ile Leu Phe  
 Arg Asp Ile Ser Leu Glu<sub>150</sub> Ile Phe Arg Val Trp<sub>155</sub> Gln Pro Ser Glu<sub>160</sub> Asn  
 Met Ile Leu Ile Arg<sub>165</sub> Trp Asn Leu Lys Gly<sub>170</sub> Val Pro Arg Val Pro<sub>175</sub> Trp

Glu Ala Lys Gly Glu Phe Gln Gly Thr Ser Arg Tyr Lys Leu Asp Arg  
 180 185 190

Asn Gly Lys Ile Tyr Glu His Lys Val Asp Asn Leu Ala Phe Asn Phe  
 195 200 205

Pro Gln Gln Leu Lys Pro Ala Ala Ser Val Leu Asp Leu Val Thr Ala  
 210 215 220

Ser Pro Ala Ser Ser Pro Asn Pro Thr Phe Phe Phe Ser Pro Val Asp  
 225 230 235 240

Ser Tyr Ser Ser Ser Trp Val Lys Phe Tyr Gln Ala Val Arg Gly Thr  
 245 250 255

Leu Glu Thr Glu Asp Met Phe Val Thr Thr Asp Cys Leu Val Thr Cys  
 260 265 270

Ser

<210> 1997

<211> 750

<212> DNA

<213> Arabidopsis thaliana

<400> 1997

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cgtgcttcac tgcttgagac ccctatctta tgggctggct ggatttgtgt cttctacgtc	240
ctcgtgaaag ctggctttgc tggatccaag tctaacccta tcgtttctgg tttggatact	300
ggtggtgttg atgttgaata tgatgatggt gctgatcttg gtttctcaaa gtggcttcag	360
aacattaagg gcaacaaacc agataaggat gcagctgata agaggaagct agtgagcaaa	420
tggcacccaa cgacaaaggg aacacttaga aggaactaca ggataccttc gaaagccgaa	480
ggaaaccgtt tgcttaaagc cattgcgtct cttctctcag atgatgatca ttttagagat	540
gcaacatctc acaagggttg tcaaatacgg agggagagtg cgcacggtca aagcgtatgt	600
tgcaacaatg tgagagctct gtttgatgag ttaccgacgc cacatttggt ggtggagatc	660
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750

&lt;210&gt; 1998

&lt;211&gt; 249

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 1998

Met Gln Leu Ser Leu Val Gln Val Ser Ser Val Ser Asn Phe Arg Ser  
1 5 10 15Gln Ser Thr Ile Pro Thr Leu Ser Asn Ser Asn Pro Ser Cys Leu Leu  
20 25 30Leu Gln Lys Ser Ile Phe Pro Gly Ser Lys Leu Thr Leu His Arg Ile  
35 40 45Phe Arg Tyr Pro Lys Lys Ile Ser Asn Gly Ser Thr Arg Ala Ser Leu  
50 55 60Leu Glu Thr Pro Ile Leu Trp Ala Gly Arg Ile Cys Val Phe Tyr Ala  
65 70 75 80Leu Val Lys Ala Gly Phe Ala Gly Ser Lys Ser Asn Pro Ile Val Ser  
85 90 95Gly Leu Asp Thr Gly Gly Val Asp Val Glu Tyr Asp Asp Gly Ala Asp  
100 105 110Leu Gly Phe Ser Lys Trp Leu Gln Asn Ile Lys Gly Asn Lys Pro Asp  
115 120 125Lys Asp Ala Ala Asp Lys Arg Lys Leu Val Ser Lys Trp His Pro Thr  
130 135 140Thr Lys Gly Thr Leu Arg Arg Asn Tyr Arg Ile Pro Ser Lys Ala Glu  
145 150 155 160Gly Asn Arg Leu Leu Lys Ala Ile Ala Ser Leu Leu Ser Asp Asp Asp  
165 170 175His Phe Arg Asp Ala Thr Ser His Lys Gly Cys Gln Ile Arg Arg Glu  
180 185 190

Ser Ala His Gly Gln Ser Val Cys Cys Asn Asn Val Arg Ala Leu Phe  
 195 200 205

Asp Glu Leu Pro Thr Pro His Leu Val Val Glu Ile Thr Pro Phe Pro  
 210 215 220

Ala Gly Pro Leu Thr Glu Asn Asp Tyr Leu Lys Ala Glu Lys Leu Glu  
 225 230 235 240

Arg Ile Leu Arg Ser Gly Ala Asn Ile  
 245

<210> 1999

<211> 2739

<212> DNA

<213> Arabidopsis thaliana

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 gaagcccaga agcttggcat gatggagaaa ggctatgttt ggatagctac aacttggttg 780  
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&lt;210&gt; 2000

&lt;211&gt; 912

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2000

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 Gly Met Ile Ser<sub>20</sub> Glu Gly Ala Gly<sub>25</sub> Leu Arg Pro Arg Tyr Val<sub>30</sub> Asp Val  
 Gly Ala Ile<sub>35</sub> Phe Ser Leu Gly<sub>40</sub> Thr Leu Gln Gly<sub>45</sub> Glu Val<sub>45</sub> Thr Asn Ile  
 Ala Met<sub>50</sub> Lys Ala Ala Glu<sub>55</sub> Glu Asp Val<sub>55</sub> Asn Ser Asp<sub>60</sub> Pro Ser Phe Leu  
 Gly<sub>65</sub> Gly Ser Lys Leu Arg<sub>70</sub> Ile Thr Thr Tyr Asp<sub>75</sub> Ala Lys Arg Asn Gly<sub>80</sub>  
 Phe Leu Thr Ile<sub>85</sub> Met Gly Ala Leu Gln Phe<sub>90</sub> Met Glu Thr Asp Ala Val<sub>95</sub>  
 Ala Ile Ile Gly<sub>100</sub> Pro Gln Thr Ser Ile<sub>105</sub> Met Ala His Val<sub>110</sub> Leu Ser His  
 Leu Ala Asn<sub>115</sub> Glu Leu Ser Val<sub>120</sub> Pro Met Leu Ser Phe Thr<sub>125</sub> Ala Leu Asp  
 Pro Ser<sub>130</sub> Leu Ser Ala Leu Gln<sub>135</sub> Phe Pro Phe Phe Val<sub>140</sub> Gln Thr Ala Pro  
 Ser Asp Leu Phe Leu<sub>150</sub> Met Arg Ala Ile Ala Glu<sub>155</sub> Met Ile Ser Tyr Tyr<sub>160</sub>  
 Gly Trp Ser Glu Val<sub>165</sub> Ile Ala Leu Tyr Asn<sub>170</sub> Asp Asp Asp Asn Ser<sub>175</sub> Arg  
 Asn Gly Ile Thr<sub>180</sub> Ala Leu Gly Asp Glu<sub>185</sub> Leu Glu Gly Arg Arg<sub>190</sub> Cys Lys  
 Ile Ser Tyr<sub>195</sub> Lys Ala Val Leu Pro<sub>200</sub> Leu Asp Val Val Ile Thr Ser Pro  
 Arg Glu<sub>210</sub> Ile Ile Asn Glu Leu<sub>215</sub> Val Lys Ile Gln Gly<sub>220</sub> Met Glu Ser Arg  
 Val Ile Ile Val Asn Thr Phe Pro Lys Thr Gly Lys Lys Ile Phe Glu  
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225                      230                      240

Glu Ala Gln Lys Leu Gly Met Met Glu Lys Gly Tyr Val Trp Ile Ala  
245                      250                      255

Thr Thr Trp Leu Thr Ser Leu Leu Asp Ser Val Asn Pro Leu Pro Ala  
260                      265                      270

Lys Thr Ala Glu Ser Leu Arg Gly Val Leu Thr Leu Arg Ile His Thr  
275                      280                      285

Pro Asn Ser Lys Lys Lys Lys Asp Phe Val Ala Arg Trp Asn Lys Leu  
290                      295                      300

Ser Asn Gly Thr Val Gly Leu Asn Val Tyr Gly Leu Tyr Ala Tyr Asp  
305                      310                      315                      320

Thr Val Trp Ile Ile Ala Arg Ala Val Lys Arg Leu Leu Asp Ser Arg  
325                      330                      335

Ala Asn Ile Ser Phe Ser Ser Asp Pro Lys Leu Thr Ser Met Lys Gly  
340                      345                      350

Gly Gly Ser Leu Asn Leu Gly Ala Leu Ser Ile Phe Asp Gln Gly Ser  
355                      360                      365

Gln Phe Leu Asp Tyr Ile Val Asn Thr Asn Met Thr Gly Val Thr Gly  
370                      375                      380

Gln Ile Gln Phe Leu Pro Asp Arg Ser Met Ile Gln Pro Ser Tyr Asp  
385                      390                      395                      400

Ile Ile Asn Val Val Asp Asp Gly Phe Arg Gln Ile Gly Tyr Trp Ser  
405                      410                      415

Asn His Ser Gly Leu Ser Ile Ile Pro Pro Glu Ser Leu Tyr Lys Lys  
420                      425                      430

Leu Ser Asn Arg Ser Ser Ser Asn Gln His Leu Asn Asn Val Thr Trp  
435                      440                      445

Pro Gly Gly Thr Ser Glu Thr Pro Arg Gly Trp Val Phe Pro Asn Asn  
450                      455                      460

Gly Arg Arg Leu Arg Ile Gly Val Pro Asp Arg Ala Ser Phe Lys Glu  
465                      470                      475                      480



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Phe Val Ser Arg Leu Asp Gly Ser Asn Lys Val Gln Gly Tyr Ala Ile  
 485 490 495  
 Asp Val Phe Glu Ala Ala Val Lys Leu Ile Ser Tyr Pro Val Pro His  
 500 505 510  
 Glu Phe Val Leu Phe Gly Asp Gly Leu Lys Asn Pro Asn Phe Asn Glu  
 515 520 525  
 Phe Val Asn Asn Val Thr Ile Gly Val Phe Asp Ala Val Val Gly Asp  
 530 535 540  
 Ile Ala Ile Val Thr Lys Arg Thr Arg Ile Val Asp Phe Thr Gln Pro  
 545 550 555 560  
 Tyr Ile Glu Ser Gly Leu Val Val Val Ala Pro Val Thr Lys Leu Asn  
 565 570 575  
 Asp Thr Pro Trp Ala Phe Leu Arg Pro Phe Thr Pro Pro Met Trp Ala  
 580 585 590  
 Val Thr Ala Ala Phe Phe Leu Ile Val Gly Ser Val Ile Trp Ile Leu  
 595 600 605  
 Glu His Arg Ile Asn Asp Glu Phe Arg Gly Pro Pro Arg Lys Gln Ile  
 610 615 620  
 Val Thr Ile Leu Trp Phe Ser Phe Ser Thr Met Phe Phe Ser His Arg  
 625 630 635 640  
 Glu Asn Thr Val Ser Thr Leu Gly Arg Ala Val Leu Leu Ile Trp Leu  
 645 650 655  
 Phe Val Val Leu Ile Ile Thr Ser Ser Tyr Thr Ala Ser Leu Thr Ser  
 660 665 670  
 Ile Leu Thr Val Gln Gln Leu Asn Ser Pro Ile Arg Gly Val Asp Thr  
 675 680 685  
 Leu Ile Ser Ser Ser Gly Arg Val Gly Phe Gln Val Gly Ser Tyr Ala  
 690 695 700  
 Glu Asn Tyr Met Ile Asp Glu Leu Asn Ile Ala Arg Ser Arg Leu Val  
 705 710 715 720  
 Pro Leu Gly Ser Pro Lys Glu Tyr Ala Ala Ala Leu Gln Asn Gly Thr  
 725 730 735

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Val Ala Ala Ile Val Asp Glu Arg Pro Tyr Val Asp Leu Phe Leu Ser  
740 745 750

Glu Phe Cys Gly Phe Ala Ile Arg Gly Gln Glu Phe Thr Arg Ser Gly  
755 760 765

Trp Gly Phe Ala Phe Pro Arg Asp Ser Pro Leu Ala Ile Asp Met Ser  
770 775 780

Thr Ala Ile Leu Gly Leu Ser Glu Thr Gly Gln Leu Gln Lys Ile His  
785 790 795 800

Asp Lys Trp Leu Ser Arg Ser Asn Cys Ser Asn Leu Asn Gly Ser Val  
805 810 815

Ser Asp Glu Asp Ser Glu Gln Leu Lys Leu Arg Ser Phe Trp Gly Leu  
820 825 830

Phe Leu Val Cys Gly Ile Ser Cys Phe Ile Ala Leu Phe Ile Tyr Phe  
835 840 845

Phe Lys Ile Val Arg Asp Phe Phe Arg His Gly Lys Tyr Asp Glu Glu  
850 855 860

Ala Thr Val Pro Ser Pro Glu Ser Ser Arg Ser Lys Ser Leu Gln Thr  
865 870 875 880

Phe Leu Ala Tyr Phe Asp Glu Lys Glu Asp Glu Ser Lys Arg Arg Met  
885 890 895

Lys Arg Lys Arg Asn Asp Asp Leu Ser Leu Lys Pro Ser Arg Pro Ile  
900 905 910

<210> 2001

<211> 645

<212> DNA

<213> Arabidopsis thaliana

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aaaaaaccag aacatcttct tcgtcagcca ttgtgtcaag ttccagccat agaagatgga 180  
gatttcaagc tttttgaatc acgagccatc gcgagatact acgctaccaa gttcgcggac 240  
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aagcctaggt taggcgagaa atgtgacgtc gttttggtcg aggatctcaa agtgaagcta 420  
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gaattcacta tggctgattt gacgcacatg ccggcgatgg ggtacttgat gagtataacc 540  
gatataaacc agatggttaa ggctcggggg agttttaacc ggtggtggga agagatttgc 600  
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<210> 2002

<211> 214

<212> PRT

<213> Arabidopsis thaliana

<400> 2002

Met Val Val Lys Leu Tyr Gly Gln Val Thr Ala Ala Cys Pro Gln Arg  
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20 25 30

Ile Asp Leu Asp Thr Phe Glu Gln Lys Lys Pro Glu His Leu Leu Arg  
35 40 45

Gln Pro Phe Gly Gln Val Pro Ala Ile Glu Asp Gly Asp Phe Lys Leu  
50 55 60

Phe Glu Ser Arg Ala Ile Ala Arg Tyr Tyr Ala Thr Lys Phe Ala Asp  
65 70 75 80

Gln Gly Thr Asn Leu Leu Gly Lys Ser Leu Glu His Arg Ala Ile Val  
85 90 95

Asp Gln Trp Ala Asp Val Glu Thr Tyr Tyr Phe Asn Val Leu Ala Gln  
100 105 110

Pro Leu Val Ile Asn Leu Ile Ile Lys Pro Arg Leu Gly Glu Lys Cys  
115 120 125

Asp Val Val Leu Val Glu Asp Leu Lys Val Lys Leu Gly Val Val Leu  
130 135 140

047-E2F-PCT.ST25.txt

Asp Ile Tyr Asn Asn Arg Leu Ser Ser Asn Arg Phe Leu Ala Gly Glu  
145 150 155 160

Glu Phe Thr Met Ala Asp Leu Thr His Met Pro Ala Met Gly Tyr Leu  
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Met Ser Ile Thr Asp Ile Asn Gln Met Val Lys Ala Arg Gly Ser Phe  
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<211> 1026

<212> DNA

<213> Arabidopsis thaliana

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<210> 2004

<211> 341

<212> PRT

<213> Arabidopsis thaliana

<400> 2004

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35 40 45

Ser Ala Val Asn Lys Ala Gly Leu Ala Lys Leu Ile Gly Leu Ala Gly  
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Glu Thr Asn Ile Gln Gly Glu Glu Gln Lys Lys Leu Asp Val Leu Ser  
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Asn Asp Val Phe Val Asn Ala Leu Val Ser Ser Gly Arg Thr Ser Val  
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Arg Gly Lys Tyr Cys Val Val Phe Asp Pro Leu Asp Gly Ser Ser Asn  
115 120 125

Ile Asp Cys Gly Val Ser Ile Gly Thr Ile Phe Gly Ile Tyr Thr Leu  
130 135 140

Asp His Thr Asp Glu Pro Thr Thr Ala Asp Val Leu Lys Pro Gly Asn  
145 150 155 160

Glu Met Val Ala Ala Gly Tyr Cys Met Tyr Gly Ser Ser Cys Met Leu  
165 170 175

Val Leu Ser Thr Gly Thr Gly Val His Gly Phe Thr Leu Asp Pro Ser  
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Leu Gly Glu Phe Ile Leu Thr His Pro Asp Ile Lys Ile Pro Asn Lys  
195 200 205

Gly Asn Ile Tyr Ser Val Asn Glu Gly Asn Ala Gln Asn Trp Asp Gly  
210 215 220

Pro Thr Thr Lys Tyr Val Glu Lys Cys Lys Phe Pro Lys Asp Gly Ser  
225 230 235 240

Pro Ala Lys Ser Leu Arg Tyr Val Gly Ser Met Val Ala Asp Val His  
245 250 255

Arg Thr Leu Leu Tyr Gly Gly Ile Phe Leu Tyr Pro Ala Asp Lys Lys  
260 265 270

Ser Pro Asn Gly Lys Leu Arg Val Leu Tyr Glu Val Phe Pro Met Ser  
275 280 285

Phe Leu Met Glu Gln Ala Gly Gly Gln Ala Phe Thr Gly Lys Lys Arg  
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Ala Leu Asp Leu Val Pro Glu Lys Ile His Glu Arg Ser Pro Ile Phe  
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<210> 2005

<211> 780

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<213> Arabidopsis thaliana

<400> 2005  
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cacacgtctt atacaaaaa aaaccaccgc tgtttctctg ttcaatccaa tctgagggtg 240

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&lt;210&gt; 2006

&lt;211&gt; 259

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2006

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			20					25					30		

Ser	Phe	Arg	Leu	Arg	Thr	Lys	Ser	Ser	Phe	Asp	Ser	Ile	Ser	Phe	Ser
		35					40					45			

Ser	Ser	Thr	Pro	Phe	Ser	Ala	Ser	Ser	Leu	Leu	Leu	His	Thr	Ser	Tyr
		50				55					60				

Thr	Lys	Arg	Asn	His	Arg	Cys	Phe	Ser	Val	Gln	Ser	Asn	Ala	Glu	Val
65					70					75				80	

Val	Thr	Glu	Pro	Gln	Ser	Lys	Ile	Thr	His	Lys	Val	Tyr	Phe	Asp	Ile
				85					90					95	

Ser	Val	Gly	Asn	Pro	Val	Gly	Lys	Leu	Ala	Gly	Arg	Ile	Val	Ile	Gly
			100					105					110		

Leu	Tyr	Gly	Asp	Asp	Val	Pro	Gln	Thr	Val	Glu	Asn	Phe	Arg	Ala	Leu
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Cys	Thr	Gly	Glu	Lys	Gly	Phe	Gly	Tyr	Lys	Gly	Ser	Thr	Phe	His	Arg

130

135

140

Val Ile Arg Asp Phe Met Ile Gln Gly Gly Asp Phe Glu Lys Gly Asn  
145 150 155 160

Gly Thr Gly Gly Lys Ser Val Tyr Gly Arg Thr Phe Lys Asp Glu Asn  
165 170 175

Phe Lys Leu Ser His Val Gly Pro Gly Val Leu Ser Met Ala Asn Ala  
180 185 190

Gly Pro Asn Thr Asn Gly Ser Gln Phe Phe Ile Cys Thr Ile Lys Thr  
195 200 205

Ser Trp Leu Asp Gly Arg His Val Val Phe Gly Gln Val Ile Glu Gly  
210 215 220

Met Glu Val Val Lys Leu Ile Glu Glu Gln Glu Thr Asp Arg Gly Asp  
225 230 235 240

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Ser Glu Ala

<210> 2007

<211> 1098

<212> DNA

<213> Arabidopsis thaliana

<400> 2007

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<210> 2008

<211> 365

<212> PRT

<213> Arabidopsis thaliana

<400> 2008

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Ile Ile Arg Val Ser Arg Ala Ser Gly Gly Lys Asp Arg His Ser Lys
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Val Leu Thr Ser Lys Gly Pro Arg Asp Arg Arg Val Arg Leu Ser Val
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Ser Thr Ala Leu Gln Phe Tyr Asp Leu Gln Asp Arg Leu Gly Tyr Asp
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Gln Pro Ser Lys Ala Val Glu Trp Leu Ile Lys Ala Ala Glu Asp Ser
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Ile Ser Glu Leu Pro Ser Leu Asn Asn Thr His Phe Pro Thr Asp Asp
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Glu Asn His Gln Asn Gln Thr Leu Thr Thr Val Ala Ala Asn Ser Leu
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115

120

125

Ser Lys Ser Ala Cys Ser Ser Asn Ser Asp Thr Ser Lys Asn Ser Ser  
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 Ala Arg Glu Arg Thr Ala Lys Glu Thr Lys Glu Arg Asp His Asn His  
 165 170 175  
 Thr Ser Phe Thr Asp Leu Leu Asn Ser Gly Ser Asp Pro Val Asn Ser  
 180 185 190  
 Asn Arg Gln Trp Met Ala Ser Ala Pro Ser Ser Ser Pro Met Glu Tyr  
 195 200 205  
 Phe Ser Ser Gly Leu Ile Leu Gly Ser Gly Gln Gln Thr His Phe Pro  
 210 215 220  
 Ile Ser Thr Asn Ser His Pro Phe Ser Ser Ile Ser Asp His His His  
 225 230 235 240  
 His His Pro His His Gln His Gln Glu Phe Ser Phe Val Pro Asp His  
 245 250 255  
 Leu Ile Ser Pro Ala Glu Ser Asn Gly Gly Ala Phe Asn Leu Asp Phe  
 260 265 270  
 Asn Met Ser Thr Pro Ser Gly Ala Gly Ala Ala Val Ser Ala Ala Ser  
 275 280 285  
 Gly Gly Gly Phe Ser Gly Phe Asn Arg Gly Thr Leu Gln Ser Asn Ser  
 290 295 300  
 Thr Asn Gln His Gln Ser Phe Leu Ala Asn Leu Gln Arg Phe Pro Thr  
 305 310 315 320  
 Ser Glu Ser Gly Gly Gly Pro Gln Phe Leu Phe Gly Ala Leu Pro Ala  
 325 330 335  
 Glu Asn His His His Asn His Gln Phe Gln Leu Tyr Tyr Glu Asn Gly  
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&lt;210&gt; 2009

&lt;211&gt; 945

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2009

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&lt;210&gt; 2010

&lt;211&gt; 314

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2010

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His Ser Ile Ile Ala Met Ala Ile Trp Leu Gly Ala Ile His Phe Asn
20      25      30

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50 55 60

His Arg Ser Lys Tyr Gly Arg Lys Leu Ala Arg Tyr Ile Cys Lys His  
65 70 75 80

Ala Cys Asn Tyr Phe Pro Val Ser Leu Tyr Val Glu Asp Tyr Glu Ala  
85 90 95

Phe Gln Pro Asn Arg Ala Tyr Val Phe Gly Tyr Glu Pro His Ser Val  
100 105 110

Leu Pro Ile Gly Val Val Ala Leu Cys Asp Leu Thr Gly Phe Met Pro  
115 120 125

Ile Pro Asn Ile Lys Val Leu Ala Ser Ser Ala Ile Phe Tyr Thr Pro  
130 135 140

Phe Leu Arg His Ile Trp Thr Trp Leu Gly Leu Thr Ala Ala Ser Arg  
145 150 155 160

Lys Asn Phe Thr Ser Leu Leu Asp Ser Gly Tyr Ser Cys Val Leu Val  
165 170 175

Pro Gly Gly Val Gln Glu Thr Phe His Met Gln His Asp Ala Glu Asn  
180 185 190

Val Phe Leu Ser Arg Arg Arg Gly Phe Val Arg Ile Ala Met Glu Gln  
195 200 205

Gly Ser Pro Leu Val Pro Val Phe Cys Phe Gly Gln Ala Arg Val Tyr  
210 215 220

Lys Trp Trp Lys Pro Asp Cys Asp Leu Tyr Leu Lys Leu Ser Arg Ala  
225 230 235 240

Ile Arg Phe Thr Pro Ile Cys Phe Trp Gly Val Phe Gly Ser Pro Leu  
245 250 255

Pro Cys Arg Gln Pro Met His Val Val Val Gly Lys Pro Ile Glu Val  
260 265 270

Thr Lys Thr Leu Lys Pro Thr Asp Glu Glu Ile Ala Lys Phe His Gly  
275 280 285

Gln Tyr Val Glu Ala Leu Arg Asp Leu Phe Glu Arg His Lys Ser Arg  
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Val Gly Tyr Asp Leu Glu Leu Lys Ile Leu  
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<210> 2011

<211> 852

<212> DNA

<213> Arabidopsis thaliana

<400> 2011  
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<210> 2012

<211> 283

<212> PRT

<213> Arabidopsis thaliana

<400> 2012

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20 25 30

Glu Phe Tyr Thr Glu Val Phe Gly Met Lys Leu Leu Arg Lys Arg Asp  
35 40 45

Ile Pro Glu Glu Lys Tyr Ser Asn Ala Phe Leu Gly Phe Gly Pro Glu  
50 55 60

Thr Ser Asn Phe Val Val Glu Leu Thr Tyr Asn Tyr Gly Val Ser Ser  
65 70 75 80

Tyr Asp Ile Gly Thr Gly Phe Gly His Phe Ala Ile Ser Thr Gln Asp  
85 90 95

Val Ser Lys Leu Val Glu Asn Val Arg Ala Lys Gly Gly Asn Val Thr  
100 105 110

Arg Glu Pro Gly Pro Val Lys Gly Gly Gly Ser Val Ile Ala Phe Val  
115 120 125

Lys Asp Pro Asp Gly Tyr Thr Phe Glu Leu Ile Gln Arg Gly Pro Thr  
130 135 140

Pro Glu Pro Phe Cys Gln Val Met Leu Arg Val Gly Asp Leu Asp Arg  
145 150 155 160

Ala Ile Lys Phe Tyr Glu Lys Ala Leu Gly Met Arg Leu Leu Arg Lys  
165 170 175

Ile Glu Arg Pro Glu Tyr Lys Tyr Thr Ile Gly Met Met Gly Tyr Ala  
180 185 190

Glu Glu Tyr Glu Ser Ile Val Leu Glu Leu Thr Tyr Asn Tyr Asp Val  
195 200 205

Thr Glu Tyr Thr Lys Gly Asn Ala Tyr Ala Gln Ile Ala Ile Gly Thr  
210 215 220

Asp Asp Val Tyr Lys Ser Gly Glu Val Ile Lys Ile Val Asn Gln Glu  
225 230 235 240

Leu Gly Gly Lys Ile Thr Arg Glu Ala Gly Pro Leu Pro Gly Leu Gly  
245 250 255

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Thr Lys Ile Val Ser Phe Leu Asp Pro Asp Gly Trp Lys Thr Val Leu  
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Val Asp Asn Lys Asp Phe Leu Lys Glu Leu Glu  
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<211> 477

<212> DNA

<213> Arabidopsis thaliana

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<210> 2014

<211> 158

<212> PRT

<213> Arabidopsis thaliana

<400> 2014

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Met Lys Thr Arg Asp Pro Val Gln Lys Gln Met Ala Thr Gln Val Lys  
35 40 45

Glu Asp Lys Ile Asn Gln Ala Glu Met Gln Lys Arg Glu Thr Arg Gln  
Page 2937

50

55

60

His Asn Ala Ala Met Lys Glu Ala Ala Gly Ala Gly Thr Gly Leu Gly  
65 70 75 80

Leu Gly Thr Ala Thr His Ser Thr Thr Gly Gln Val Gly His Gly Thr  
85 90 95

Gly Thr His Gln Met Ser Ala Leu Pro Gly His Gly Thr Gly Gln Leu  
100 105 110

Thr Asp Arg Val Val Glu Gly Thr Ala Val Thr Asp Pro Ile Gly Arg  
115 120 125

Asn Thr Gly Thr Gly Arg Thr Thr Ala His Asn Thr His Val Gly Gly  
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Gly Gly Ala Thr Gly Tyr Gly Thr Gly Gly Gly Tyr Thr Gly  
145 150 155

&lt;210&gt; 2015

&lt;211&gt; 456

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

<400> 2015  
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&lt;210&gt; 2016

&lt;211&gt; 151

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana



&lt;400&gt; 2016

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Ser Leu Gln Asp Pro Thr Pro Glu Val Lys Lys Pro Thr Arg Ala His  
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Ala Glu Leu Thr Asn His Gly Phe Pro Ile Gly Leu Leu Pro Leu Ser  
 35 40 45

Val Lys Asp Tyr Phe Leu Asn Gln Thr Ser Gly Asp Phe Ser Leu Phe  
 50 55 60

Leu Asn Gly Ala Cys Lys Ile Thr Leu Pro Pro Asp Asn Tyr Ile Ala  
 65 70 75 80

Thr Tyr Ser Asn Lys Val Thr Gly Arg Ile Ser Gln Gly Lys Ile Ala  
 85 90 95

Glu Leu Gln Gly Ile Arg Val Arg Ala Phe Phe Lys Ser Trp Ser Ile  
 100 105 110

Thr Gly Ile Arg Ser Ser Gly Asp Asn Leu Val Phe Glu Val Ala Gly  
 115 120 125

Ile Thr Ala Lys Tyr Pro Ser Lys Asn Phe Asp Glu Ser Leu Asp Cys  
 130 135 140

Glu Gly Lys Arg Ser Ser Ser  
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&lt;210&gt; 2017

&lt;211&gt; 828

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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&lt;210&gt; 2018

&lt;211&gt; 275

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2018

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Met Ala Ala Ser Phe Ser Ser Thr Ala Pro Thr Thr Pro Val Leu Arg
1      5      10      15

```

```

Phe Arg Ala Asn Tyr Ser Lys Pro Leu Leu Ser Leu Pro Asp Ser Cys
      20      25      30

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```

Leu Arg Ile Ile Ser Ser Ala Ile Ser Pro Ser Thr Arg Leu Ile Ala
      35      40      45

```

```

Cys Ser Phe Lys Thr Asp Lys Leu Pro Leu Gly Ala Gly Val Asn Leu
      50      55      60

```

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Ser Gly Gly Pro Val Val Lys Arg Ser Leu Gln Lys Arg Leu Val Ile
      65      70      75      80

```

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Arg Ser Ala Thr Ile Glu Glu Ile Glu Ala Glu Lys Ser Ala Ile Glu
      85      90      95

```

```

Thr Asp Val Lys Ser Lys Met Glu Lys Thr Ile Glu Thr Leu Arg Thr
      100      105      110

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Ser Phe Asn Ser Ile Arg Thr Gly Arg Ser Asn Ala Ala Met Leu Asp
      115      120      125

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047-E2F-PCT.ST25.txt

Lys Ile Glu Val Glu Tyr Tyr Gly Ser Pro Val Ser Leu Lys Ser Ile  
130 135 140

Ala Gln Ile Ser Thr Pro Asp Gly Ser Ser Leu Leu Leu Gln Pro Tyr  
145 150 155 160

Asp Lys Ser Ser Leu Lys Ala Ile Glu Lys Ala Ile Val Asn Ser Asp  
165 170 175

Leu Gly Val Thr Pro Asn Asn Asp Gly Asp Val Ile Arg Leu Ser Leu  
180 185 190

Pro Pro Leu Thr Ser Asp Arg Arg Lys Glu Leu Ser Lys Val Val Ala  
195 200 205

Lys Gln Ser Glu Glu Gly Lys Val Ala Leu Arg Asn Ile Arg Arg Asp  
210 215 220

Ala Leu Lys Ser Tyr Asp Lys Leu Glu Lys Glu Lys Lys Leu Ser Glu  
225 230 235 240

Asp Asn Val Lys Asp Leu Ser Ser Asp Leu Gln Lys Leu Ile Asp Val  
245 250 255

Tyr Met Lys Lys Ile Glu Glu Leu Tyr Lys Gln Lys Glu Lys Glu Leu  
260 265 270

Met Lys Val  
275

<210> 2019

<211> 414

<212> DNA

<213> Arabidopsis thaliana

<400> 2019  
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aagattcctt tgatatctaa ggaccatgaa cgtgcgtttt ttgactcagc tgattgggct 180  
ttaggcaagc aaaaaggaca gaagccgaaa gggcctttgg aagctctccg cccaaaactg 240  
cagccaaccc cgcaacagca accaagagca agacgaatgg cttattcttc aggcgaaact 300

gaagacactg agattgataa caacgaagct ccggatgacc aagcctgcgc atcagctgtg 360  
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<210> 2020

<211> 137

<212> PRT

<213> Arabidopsis thaliana

<400> 2020

Met Glu Asp Val Lys Gly Lys Glu Ile Ile Asp Asp Ala Pro Ile Asp  
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Asn Lys Val Ser Asp Glu Met Glu Ser Glu Glu Asn Ala Ile Lys Lys  
 20 25 30

Lys Tyr Gly Gly Leu Leu Pro Lys Lys Ile Pro Leu Ile Ser Lys Asp  
 35 40 45

His Glu Arg Ala Phe Phe Asp Ser Ala Asp Trp Ala Leu Gly Lys Gln  
 50 55 60

Lys Gly Gln Lys Pro Lys Gly Pro Leu Glu Ala Leu Arg Pro Lys Leu  
 65 70 75 80

Gln Pro Thr Pro Gln Gln Gln Pro Arg Ala Arg Arg Met Ala Tyr Ser  
 85 90 95

Ser Gly Glu Thr Glu Asp Thr Glu Ile Asp Asn Asn Glu Ala Pro Asp  
 100 105 110

Asp Gln Ala Cys Ala Ser Ala Val Asp Ser Thr Asn Leu Lys Asp Asp  
 115 120 125

Gly Gly Ala Lys Asp Asn Ile Lys Ser  
 130 135

<210> 2021

<211> 1392

<212> DNA

<213> Arabidopsis thaliana

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 ttagagaacg aaatcgttat tctacggtcg atgaagtctc atccaacat agtgaggttt 240  
 ctcggtgatg atgtgtctaa agaaggaacg gcgtcggttc gaaatcttca tttagagtat 300  
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 ggatcggcgg ttgagtttga gaaatctacg attcatgttt cggcactggt aagtcgcgtt 540  
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<210> 2022

<211> 463

<212> PRT

<213> *Arabidopsis thaliana*

<400> 2022

Met Glu Lys Gln Asn Ile Ile Ser Asn Thr Ser Ser Ser Ser Ser Ser  
 Page 2943

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Trp Ile Arg Gly Ser Cys Val Gly Arg Gly Cys Phe Gly Thr Val Ser  
20 25 30  
Lys Ala Leu Ser Lys Ile Asp Gly Gly Leu Phe Ala Val Lys Ser Ile  
35 40 45  
Asp Leu Ala Thr Cys Leu Pro Ser Gln Ala Glu Ser Leu Glu Asn Glu  
50 55 60  
Ile Val Ile Leu Arg Ser Met Lys Ser His Pro Asn Ile Val Arg Phe  
65 70 75 80  
Leu Gly Asp Asp Val Ser Lys Glu Gly Thr Ala Ser Phe Arg Asn Leu  
85 90 95  
His Leu Glu Tyr Ser Pro Glu Gly Asp Val Ala Asn Gly Gly Ile Val  
100 105 110  
Asn Glu Thr Leu Leu Arg Arg Tyr Val Trp Cys Leu Val Ser Ala Leu  
115 120 125  
Ser His Val His Ser Asn Gly Ile Val His Cys Asp Val Lys Ser Lys  
130 135 140  
Asn Val Leu Val Phe Asn Gly Gly Ser Ser Val Lys Leu Ala Asp Phe  
145 150 155 160  
Gly Ser Ala Val Glu Phe Glu Lys Ser Thr Ile His Val Ser Pro Arg  
165 170 175  
Gly Ser Pro Leu Trp Met Ala Pro Glu Val Val Arg Arg Glu Tyr Gln  
180 185 190  
Gly Pro Glu Ser Asp Val Trp Ser Leu Gly Cys Thr Val Ile Glu Met  
195 200 205  
Leu Thr Gly Lys Pro Ala Trp Glu Asp His Gly Phe Asp Ser Leu Ser  
210 215 220  
Arg Ile Gly Phe Ser Asn Asp Leu Pro Phe Ile Pro Val Gly Leu Ser  
225 230 235 240  
Glu Leu Gly Arg Asp Phe Leu Glu Lys Cys Leu Lys Arg Asp Arg Ser  
245 250 255

Gln Arg Trp Ser Cys Asp Gln Leu Leu Gln His Pro Phe Leu Cys Gln  
 260 265 270

Asp His His Asp Ser Phe Phe Thr Glu Ser Ser Pro Arg Cys Val Leu  
 275 280 285

Asp Trp Val Asn Ser Glu Phe Asp Glu Glu Glu Glu Ser Asp Glu Trp  
 290 295 300

Arg Pro Glu Ser Met Val Ser Ala Met Ala Arg Ile Ser Lys Leu Ala  
 305 310 315 320

Ile Thr Gly Gly Ala Asn Trp Glu Ser Asn Gly Trp Thr Glu Val Arg  
 325 330 335

Asp Thr Ser Glu Glu Ser Glu Ala Lys Lys Glu Val Leu Val Ser Pro  
 340 345 350

Arg Val Glu Leu Glu Ser Tyr Ile Ser Leu Glu Ser Ser Ser Asp Asp  
 355 360 365

Ser Val Arg Gln Pro Arg Asn Glu Glu Ser Ala Thr Glu Leu Ala Ser  
 370 375 380

Ala Val Thr Cys Glu Ala Ile Leu Leu Val Met Ile Leu Val Val Glu  
 385 390 395 400

Asn Ile Gln Ile Tyr Ala Thr Phe Tyr Thr Ser Ser Ile Ile Met His  
 405 410 415

Ile Leu Tyr Cys Ser Cys Cys Tyr Tyr His Tyr Gln Asn Asn  
 420 425 430

Asn Lys Lys Asn Asn Phe Ser Lys Ser Thr Ser Phe Ile Leu Ser Leu  
 435 440 445

Asn Phe Leu Phe Gly Ile Ala Cys Asp Ser Asp Arg Ser Ile Tyr  
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<210> 2023

<211> 882

<212> DNA

<213> Arabidopsis thaliana

<400> 2023

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ctttggctcg acaaatccac tgggagtggg ttcaagtctc ttcgtccata ccggtcgggc      240
tactttggtg cttccattaa gtcccaacca ggcttcactg ctggagtggg tacatccctc      300
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cggcagcaga tggcggcatt gacatgggca cagaggaact tcttggctta taactattgc      840
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&lt;210&gt; 2024

&lt;211&gt; 293

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2024

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Met Ala Leu Ser  Leu Ile Phe Leu Ala Leu Leu Val Leu Cys Pro Ser
1           5           10           15

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```

Ser Gly His Ser  Gln Arg Ser Pro Ser Pro Gly Tyr Tyr Pro Ser Ser
           20           25           30

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```

Arg Val Pro Thr Ser Pro Phe Asp Arg Glu Phe Arg Thr Leu Trp Gly
           35           40           45

```

```

Ser Gln His Gln Arg Arg Glu Gln Asp Val Val Thr Leu Trp Leu Asp
           50           55           60

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```

Lys Ser Thr Gly Ser Gly Phe Lys Ser Leu Arg Pro Tyr Arg Ser Gly
65           70           75           80

```



Tyr Phe Gly Ala Ser Ile Lys Leu Gln Pro Gly Phe Thr Ala Gly Val  
85 90 95

Asp Thr Ser Leu Tyr Leu Ser Asn Asn Gln Glu His Pro Gly Asp His  
100 105 110

Asp Glu Val Asp Ile Glu Phe Leu Gly Thr Thr Pro Gly Lys Pro Tyr  
115 120 125

Ser Leu Gln Thr Asn Val Phe Val Arg Gly Ser Gly Asp Arg Asn Val  
130 135 140

Ile Gly Arg Glu Met Lys Phe Thr Leu Trp Phe Asp Pro Thr Gln Asp  
145 150 155 160

Phe His His Tyr Ala Ile Leu Trp Asn Pro Asn Gln Ile Val Phe Phe  
165 170 175

Val Asp Asp Val Pro Ile Arg Thr Tyr Asn Arg Lys Asn Glu Ala Ile  
180 185 190

Phe Pro Thr Arg Pro Met Trp Val Tyr Gly Ser Ile Trp Asp Ala Ser  
195 200 205

Asp Trp Ala Thr Glu Asn Gly Arg Ile Lys Ala Asp Tyr Arg Tyr Gln  
210 215 220

Pro Phe Val Ala Lys Tyr Lys Asn Phe Lys Leu Ala Gly Cys Thr Ala  
225 230 235 240

Asp Ser Ser Ser Ser Cys Arg Pro Pro Ser Pro Ala Pro Met Arg Asn  
245 250 255

Arg Gly Leu Ser Arg Gln Gln Met Ala Ala Leu Thr Trp Ala Gln Arg  
260 265 270

Asn Phe Leu Val Tyr Asn Tyr Cys His Asp Pro Lys Arg Asp His Thr  
275 280 285

Gln Thr Pro Glu Cys  
290

<210> 2025

<211> 699

<212> DNA

<213> Arabidopsis thaliana

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 aattctcatc ggattatttc tcttccaatt tctacaacgg gagctaaact atctagatcg 180  
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<210> 2026

<211> 232

<212> PRT

<213> Arabidopsis thaliana

<400> 2026

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Leu Leu Arg Ser Leu Ser Ser Ser Ser Ser Ser Ser Ser Lys Arg  
 20 25 30

Phe Asp Ser Ala Lys Pro Leu Phe Asn Ser His Arg Ile Ile Ser Leu  
 35 40 45

Pro Ile Ser Thr Thr Gly Ala Lys Leu Ser Arg Ser Glu His Ser Met  
 50 55 60

Ala Ala Ser Ser Glu Pro Lys Ser Leu Tyr Asp Phe Thr Val Lys Asp  
 65 70 75 80

Ala Lys Gly Asn Asp Val Asp Leu Ser Ile Tyr Lys Gly Lys Val Leu  
 85 90 95

047-E2F-PCT.ST25.txt

Leu Ile Val Asn Val Ala Ser Gln Cys Gly Leu Thr Asn Ser Asn Tyr  
100 105 110

Thr Glu Leu Ala Gln Leu Tyr Glu Lys Tyr Lys Gly His Gly Phe Glu  
115 120 125

Ile Leu Ala Phe Pro Cys Asn Gln Phe Gly Asn Gln Glu Pro Gly Thr  
130 135 140

Asn Glu Glu Ile Val Gln Phe Ala Cys Thr Arg Phe Lys Ala Glu Tyr  
145 150 155 160

Pro Ile Phe Asp Lys Val Asp Val Asn Gly Asp Lys Ala Ala Pro Val  
165 170 175

Tyr Lys Phe Leu Lys Ser Ser Lys Gly Gly Leu Phe Gly Asp Gly Ile  
180 185 190

Lys Trp Asn Phe Ala Lys Phe Leu Val Asp Lys Asp Gly Asn Val Val  
195 200 205

Asp Arg Phe Ala Pro Thr Thr Ser Pro Leu Ser Ile Glu Lys Asp Val  
210 215 220

Lys Lys Leu Leu Gly Val Thr Ala  
225 230

<210> 2027

<211> 1182

<212> DNA

<213> Arabidopsis thaliana

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aaatcgagct caatcttcgg agattcacta cgattagcac caaaatcgca acttaaagcc 180  
acaaaagcta agagcaatgg tgcttcaact gtgaccaaat gtgaaattgg ccaagcttg 240  
gaagagtttt tggcacaagc aactcctgac aagggttga gaactttgct gatgtgtatg 300  
ggagaagcat tgagaacaat agcttttaaa gttagaacag ctcttgcgg tggaaacagct 360  
tgtgttaatt cctttggtga tgaacaactc gctgttgata tgcttgctga taagcttctc 420

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ggatcaagca ttgtggatac aaatttcact gtgggaacca tattcggtgt ttggcctgga 600
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&lt;210&gt; 2028

&lt;211&gt; 393

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2028

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20 25 30

Thr Ser Ser Ser Phe Lys Arg Leu Lys Ser Ser Ser Ile Phe Gly Asp  
35 40 45

Ser Leu Arg Leu Ala Pro Lys Ser Gln Leu Lys Ala Thr Lys Ala Lys  
50 55 60

Ser Asn Gly Ala Ser Thr Val Thr Lys Cys Glu Ile Gly Gln Ser Leu  
65 70 75 80

Glu Glu Phe Leu Ala Gln Ala Thr Pro Asp Lys Gly Leu Arg Thr Leu  
85 90 95

Leu Met Cys Met Gly Glu Ala Leu Arg Thr Ile Ala Phe Lys Val Arg  
 100 105 110  
 Thr Ala Ser Cys Gly Gly Thr Ala Cys Val Asn Ser Phe Gly Asp Glu  
 115 120 125  
 Gln Leu Ala Val Asp Met Leu Ala Asp Lys Leu Leu Phe Glu Ala Leu  
 130 135 140  
 Gln Tyr Ser His Val Cys Lys Tyr Ala Cys Ser Glu Glu Val Pro Glu  
 145 150 155 160  
 Leu Gln Asp Met Gly Gly Pro Val Glu Gly Gly Phe Ser Val Ala Phe  
 165 170 175  
 Asp Pro Leu Asp Gly Ser Ser Ile Val Asp Thr Asn Phe Thr Val Gly  
 180 185 190  
 Thr Ile Phe Gly Val Trp Pro Gly Asp Lys Leu Thr Gly Ile Thr Gly  
 195 200 205  
 Gly Asp Gln Val Ala Ala Ala Met Gly Ile Tyr Gly Pro Arg Thr Thr  
 210 215 220  
 Tyr Val Leu Ala Val Lys Gly Phe Pro Gly Thr His Glu Phe Leu Leu  
 225 230 235 240  
 Leu Asp Glu Gly Lys Trp Gln His Val Lys Glu Thr Thr Glu Ile Ala  
 245 250 255  
 Glu Gly Lys Met Phe Ser Pro Gly Asn Leu Arg Ala Thr Phe Asp Asn  
 260 265 270  
 Ser Glu Tyr Ser Lys Leu Ile Asp Tyr Tyr Val Lys Glu Lys Tyr Thr  
 275 280 285  
 Leu Arg Tyr Thr Gly Gly Met Val Pro Asp Val Asn Gln Ile Ile Val  
 290 295 300  
 Lys Glu Lys Gly Ile Phe Thr Asn Val Thr Ser Pro Thr Ala Lys Ala  
 305 310 315 320  
 Lys Leu Arg Leu Leu Phe Glu Val Ala Pro Leu Gly Leu Leu Ile Glu  
 325 330 335  
 Asn Ala Gly Gly Phe Ser Ser Asp Gly His Lys Ser Val Leu Asp Lys  
 340 345 350

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Thr Ile Ile Asn Leu Asp Asp Arg Thr Gln Val Ala Tyr Gly Ser Lys  
355 360 365

Asn Glu Ile Ile Arg Phe Glu Glu Thr Leu Tyr Gly Thr Ser Arg Leu  
370 375 380

Lys Asn Val Pro Ile Gly Val Thr Ala  
385 390

<210> 2029

<211> 918

<212> DNA

<213> Arabidopsis thaliana

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gacttatgcy gcgctaagct tcgtgaggaa tcgcttaatc cgtaaattt ttccagttcc 240  
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caacctcttc ctgatttggc atcatatttg ttcaagaacc gaattgtata ttggggaatg 360  
tctctcgtac cttcagttac tgagttgata cttgcggagt tcttttacct tcagtatgaa 420  
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aagacagaaa tggtaagct gtattcaag catattgga aatccccgga gcgattgaa 780  
gtgacatga aacgcccgaa atattttagt cccactgagg ctgttggaata tgggatcatt 840  
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<210> 2030

<211> 305

<212> PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2030

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 Pro Arg Phe Ser Ser Ser Ser Ser Leu Arg Ala Ser Leu Ser Asn Gly  
 35 40 45  
 Phe Leu Ser Pro Tyr Thr Gly Gly Ser Ile Ser Ser Asp Leu Cys Gly  
 50 55 60  
 Ala Lys Leu Arg Ala Glu Ser Leu Asn Pro Leu Asn Phe Ser Ser Ser  
 65 70 75 80  
 Lys Pro Lys Arg Gly Val Val Thr Met Val Ile Pro Phe Ser Lys Gly  
 85 90 95  
 Ser Ala His Glu Gln Pro Pro Pro Asp Leu Ala Ser Tyr Leu Phe Lys  
 100 105 110  
 Asn Arg Ile Val Tyr Leu Gly Met Ser Leu Val Pro Ser Val Thr Glu  
 115 120 125  
 Leu Ile Leu Ala Glu Phe Leu Tyr Leu Gln Tyr Glu Asp Glu Glu Lys  
 130 135 140  
 Pro Ile Tyr Leu Tyr Ile Asn Ser Thr Gly Thr Thr Lys Asn Gly Glu  
 145 150 155 160  
 Lys Leu Gly Tyr Asp Thr Glu Ala Phe Ala Ile Tyr Asp Val Met Gly  
 165 170 175  
 Tyr Val Lys Pro Pro Ile Phe Thr Leu Cys Val Gly Asn Ala Trp Gly  
 180 185 190  
 Glu Ala Ala Leu Leu Leu Thr Ala Gly Ala Lys Gly Asn Arg Ser Ala  
 195 200 205  
 Leu Pro Ser Ser Thr Ile Met Ile Lys Gln Pro Ile Ala Arg Phe Gln  
 210 215 220  
 Gly Gln Ala Thr Asp Val Glu Ile Ala Arg Lys Glu Ile Lys His Ile  
 Page 2953

225                      230                      235                      240

Lys Thr Glu Met Val Lys Leu Tyr Ser Lys His Ile Gly Lys Ser Pro  
245                      250                      255

Glu Gln Ile Glu Ala Asp Met Lys Arg Pro Lys Tyr Phe Ser Pro Thr  
260                      265                      270

Glu Ala Val Glu Tyr Gly Ile Ile Asp Lys Val Val Tyr Asn Glu Arg  
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Gly Ser Gln Asp Arg Gly Val Val Ser Asp Leu Lys Lys Ala Gln Leu  
290                      295                      300

Ile  
305

<210> 2031

<211> 708

<212> DNA

<213> Arabidopsis thaliana

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agtatggaat ggttagctgg agagaagacg aaagtgggtg gaacatttcc tcctcggaag 240  
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<210> 2032

<211> 235



&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2032

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 1 5 10 15

Lys Pro Leu Gly Arg Phe Ile Asn Ser Lys Ser Gly Gly Arg Lys Leu  
 20 25 30

Phe Phe Ser Val Val Arg Ala Ser Ser Asp Asp Ala Asp Cys Asn Ala  
 35 40 45

Glu Glu Cys Ala Pro Glu Lys Glu Val Gly Thr Val Ser Met Glu Trp  
 50 55 60

Leu Ala Gly Glu Lys Thr Lys Val Val Gly Thr Phe Pro Pro Arg Lys  
 65 70 75 80

Pro Arg Gly Trp Thr Gly Tyr Val Glu Lys Asp Thr Ala Gly Gln Thr  
 85 90 95

Asn Val Tyr Ser Ile Glu Pro Ala Val Tyr Val Ala Glu Ser Ala Ile  
 100 105 110

Ser Ser Gly Thr Ala Gly Ser Ser Ala Asp Gly Ala Glu Asn Thr Ala  
 115 120 125

Ala Ile Val Ala Gly Ile Ala Leu Ile Ala Val Ala Ala Ala Ser Ser  
 130 135 140

Ile Leu Leu Gln Val Gly Lys Asp Ala Pro Thr Arg Pro Lys Ala Val  
 145 150 155 160

Asp Tyr Ser Gly Pro Ser Leu Ser Tyr Tyr Ile Asn Lys Phe Lys Pro  
 165 170 175

Ser Glu Ile Val Gln Pro Ser Thr Pro Ser Val Thr Glu Ala Pro Pro  
 180 185 190

Val Ala Glu Leu Glu Thr Ser Leu Pro Glu Thr Pro Ser Val Ala Gln  
 195 200 205

Gln Glu Thr Ser Leu Pro Glu Thr Met Ala Ser Glu Ala Gln Pro Glu  
 210 215 220

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Ala Ser Ser Val Pro Thr Thr Ser Ser Thr Ser  
225 230 235

<210> 2033

<211> 327

<212> DNA

<213> Arabidopsis thaliana

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<210> 2034

<211> 108

<212> PRT

<213> Arabidopsis thaliana

<400> 2034

Met Ala Ile Ile Ala Ser Thr Phe Gly Thr Gly Leu Ser Tyr Ala Gly  
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Glu Leu Pro Phe Lys Pro Val Thr Gly Gly Glu Val Gly Arg Lys Gln  
20 25 30  
Gln Arg Met Val Val Val Arg Ala Glu Gly Gly Gly Gly Ile Asn Pro  
35 40 45  
Glu Ile Arg Lys Asn Glu Asp Lys Val Val Asp Ser Val Val Val Thr  
50 55 60  
Glu Leu Ser Lys Asn Ile Thr Pro Tyr Cys Arg Cys Trp Arg Ser Gly  
65 70 75 80  
Thr Phe Pro Leu Cys Asp Gly Ser His Val Lys His Asn Lys Ala Asn  
85 90 95

Gly Asp Asn Val Gly Pro Leu Leu Leu Lys Lys Gln  
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<210> 2035

<211> 1779

<212> DNA

<213> *Arabidopsis thaliana*

<400> 2035

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gccaacaagg tcggcccatc tcacaatcca agtgagacgt atcgatatct tgatcttccc   180
ttctgtatcc cagagggtgt gaaagagaag aagggaagctc ttggcgaggt tctaaccggg   240
gatcggctag ttagcgctcc atacaagctc aacttcagag atgaaaaaga gctcgaggta   300
tactgcaaca agaagttgag taaagaagag gtcaaacagt tcagaaaagc tgttgagaag   360
gactactact tccagatgta ctatgatgat ctacctatct ggggattcat tggaaagggt   420
gacaaggata tcaaatctga tccgagtgaa ttcaaatatt tcttgtacaa gcacattcag   480
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aaaaacagca aagcagagtt ccaagacca tgccgtacaa ccaatatcc tcgtgagatt  1320
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&lt;210&gt; 2036

&lt;211&gt; 592

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2036

Met Arg Thr Pro Thr Thr Ile Leu Leu Leu Val Gly Ala Ile Leu Phe  
 1 5 10 15

Ser Gly Ala Gly Tyr Val Arg Ser Asp Ala Ser Asp His Arg Tyr Lys  
 20 25 30

Glu Gly Asp Thr Val Pro Leu Tyr Ala Asn Lys Val Gly Pro Phe His  
 35 40 45

Asn Pro Ser Glu Thr Tyr Arg Tyr Phe Asp Leu Pro Phe Cys Ile Pro  
 50 55 60

Glu Gly Val Lys Glu Lys Lys Glu Ala Leu Gly Glu Val Leu Asn Gly  
 65 70 75 80

Asp Arg Leu Val Ser Ala Pro Tyr Lys Leu Asn Phe Arg Asp Glu Lys  
 85 90 95

Glu Ser Glu Val Tyr Cys Asn Lys Lys Leu Ser Lys Glu Glu Val Lys  
 100 105 110

Gln Phe Arg Lys Ala Val Glu Lys Asp Tyr Tyr Phe Gln Met Tyr Tyr  
 115 120 125

Asp Asp Leu Pro Ile Trp Gly Phe Ile Gly Lys Val Asp Lys Asp Ile  
 130 135 140

047-E2F-PCT.ST25.txt

Lys Ser Asp Pro Ser Glu Phe Lys Tyr Phe Leu Tyr Lys His Ile Gln  
 145 150 155 160  
 Phe Glu Ile Leu Tyr Asn Lys Asp Arg Val Ile Glu Ile Ser Ala Arg  
 165 170 175  
 Met Asp Pro His Ser Leu Val Asp Leu Thr Glu Asp Lys Glu Val Asp  
 180 185 190  
 Ala Glu Phe Met Tyr Thr Val Lys Trp Lys Glu Thr Glu Thr Pro Phe  
 195 200 205  
 Glu Lys Arg Met Glu Lys Tyr Ser Met Ser Ser Ser Leu Pro His His  
 210 215 220  
 Leu Glu Ile His Trp Phe Ser Ile Ile Asn Ser Cys Val Thr Val Leu  
 225 230 235 240  
 Leu Leu Thr Gly Phe Leu Ala Thr Ile Leu Met Arg Val Leu Lys Asn  
 245 250 255  
 Asp Phe Met Lys Tyr Ala Gln Asp Glu Glu Ala Ala Asp Asp Gln Glu  
 260 265 270  
 Glu Thr Gly Trp Lys Tyr Ile His Gly Asp Val Phe Arg Phe Pro Thr  
 275 280 285  
 His Asn Ser Leu Phe Ala Ala Ser Leu Gly Ser Gly Thr Gln Leu Phe  
 290 295 300  
 Thr Leu Thr Ile Phe Ile Phe Met Leu Ala Leu Val Gly Val Phe Tyr  
 305 310 315 320  
 Pro Tyr Asn Arg Gly Ala Leu Phe Thr Ala Leu Val Val Ile Tyr Ala  
 325 330 335  
 Leu Thr Ser Gly Ile Ala Gly Tyr Thr Ser Ala Ser Phe Tyr Cys Gln  
 340 345 350  
 Leu Glu Gly Lys Ser Trp Val Arg Asn Leu Leu Leu Thr Gly Cys Leu  
 355 360 365  
 Phe Cys Gly Pro Leu Phe Leu Thr Phe Cys Phe Leu Asn Thr Val Ala  
 370 375 380  
 Ile Thr Tyr Thr Ala Thr Ala Ala Leu Pro Phe Gly Thr Ile Val Val  
 385 390 395 400

047-E2F-PCT.ST25.txt

Ile Val Leu Ile Trp Thr Leu Val Thr Ser Pro Leu Leu Val Leu Gly  
405 415

Gly Ile Ala Gly Lys Asn Ser Lys Ala Glu Phe Gln Ala Pro Cys Arg  
420 425 430

Thr Thr Lys Tyr Pro Arg Glu Ile Pro Pro Leu Pro Trp Tyr Arg Ser  
435 440 445

Ala Ile Pro Gln Met Ala Met Ala Gly Phe Leu Pro Phe Ser Ala Ile  
450 455 460

Tyr Ile Glu Leu Tyr Tyr Ile Phe Ala Ser Val Trp Gly His Arg Ile  
465 470 475 480

Tyr Thr Ile Tyr Ser Ile Leu Phe Ile Val Phe Ile Ile Leu Ile Ile  
485 490 495

Val Thr Ala Phe Ile Thr Val Ala Leu Thr Tyr Phe Gln Leu Ala Ala  
500 505 510

Glu Asp His Gln Trp Trp Trp Arg Ser Phe Leu Cys Gly Gly Ser Thr  
515 520 525

Gly Leu Phe Ile Tyr Ala Tyr Cys Leu Tyr Tyr Tyr Tyr Ala Arg Ser  
530 535 540

Asp Met Ser Gly Phe Met Gln Thr Ser Phe Phe Phe Gly Tyr Met Ala  
545 550 555 560

Cys Ile Cys Tyr Gly Phe Phe Leu Met Leu Gly Thr Val Gly Phe Arg  
565 570 575

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580 585 590

<210> 2037

<211> 741

<212> DNA

<213> Arabidopsis thaliana

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ccaaggaagg aagctactcc agaattgctc gattttatcc gagaattgcg aaaggtcgct 120  
Page 2960

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&lt;210&gt; 2038

&lt;211&gt; 246

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2038

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Met Ala Ala Lys Ile Pro Gly Val Ile Ala Leu Phe Asp Val Asp Gly
1      5      10
Thr Leu Thr Ala Pro Arg Lys Glu Ala Thr Pro Glu Leu Leu Asp Phe
20     25     30
Ile Arg Glu Leu Arg Lys Val Val Thr Ile Gly Val Val Gly Gly Ser
35     40     45
Asp Leu Ser Lys Ile Ser Glu Gln Leu Gly Lys Thr Val Thr Asn Asp
50     55     60
Tyr Asp Tyr Cys Phe Ser Glu Asn Gly Leu Val Ala His Lys Asp Gly
65     70     75     80
Lys Ser Ile Gly Ile Gln Ser Leu Lys Leu His Leu Gly Asp Asp Lys
85     90     95
Leu Lys Glu Leu Ile Asn Phe Thr Leu His Tyr Ile Ala Asp Leu Asp
100    105    110

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047-E2F-PCT.ST25.txt

Ile Pro Ile Lys Arg Gly Thr Phe Ile Glu Phe Arg Asn Gly Met Leu  
115 120 125

Asn Val Ser Pro Ile Gly Arg Asn Cys Ser Gln Glu Glu Arg Asp Glu  
130 135 140

Phe Glu Arg Tyr Asp Lys Val Gln Asn Ile Arg Pro Lys Met Val Ala  
145 150 155 160

Glu Leu Arg Glu Arg Phe Ala His Leu Asn Leu Thr Phe Ser Ile Gly  
165 170 175

Gly Gln Ile Ser Phe Asp Val Phe Pro Lys Gly Trp Asp Lys Thr Tyr  
180 185 190

Cys Leu Gln Tyr Leu Glu Asp Phe Ser Glu Ile His Phe Phe Gly Asp  
195 200 205

Lys Thr Tyr Glu Gly Gly Asn Asp Tyr Glu Ile Tyr Glu Ser Pro Lys  
210 215 220

Thr Ile Gly His Ser Val Thr Ser Pro Asp Asp Thr Val Ala Lys Cys  
225 230 235 240

Lys Ala Leu Phe Met Ser  
245

<210> 2039

<211> 393

<212> DNA

<213> Arabidopsis thaliana

<400> 2039  
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aacggcttcg agcttttgat ggacagagag aaaggtgtca tcacgttcga gagtctccga 180  
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attaaagaag gtgattttga ctgcacgggt gcgttgaatc agatggagtt ttgtgtgtg 300  
atgtttagcg ttatccctga ttgatggaa gcgtcgcggt gtctcgtcac ggaggtcatt 360  
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&lt;210&gt; 2040

&lt;211&gt; 130

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2040

Met Ala Ser Pro Lys Ser Pro Thr Arg Pro Thr Gln Gln Asn Pro Gln  
 1 5 10 15

Pro Asn Phe His Asp Phe Leu Pro Thr Met Ala Gly Asn Leu Gly Gly  
 20 25 30

Glu Gly Leu Ile Gly Glu Leu Cys Asn Gly Phe Glu Leu Leu Met Asp  
 35 40 45

Arg Glu Lys Gly Val Ile Thr Phe Glu Ser Leu Arg Arg Asn Ala Ala  
 50 55 60

Ala Val Leu Gly Leu Gly Asp Leu Thr Asp Glu Asp Val Arg Cys Met  
 65 70 75 80

Ile Lys Glu Gly Asp Phe Asp Cys Asp Gly Ala Leu Asn Gln Met Glu  
 85 90 95

Phe Cys Val Leu Met Phe Arg Leu Ser Pro Asp Leu Met Glu Ala Ser  
 100 105 110

Arg Cys Leu Val Thr Glu Val Ile Glu Glu Glu Phe Gly Phe Thr Arg  
 115 120 125

Arg His  
 130

&lt;210&gt; 2041

&lt;211&gt; 1599

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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attatctcaa tctccaggac aagaatcctc aaacgggtct ctcagaatct ctcgttagct	180
aaagctgctt cagctcaagc tagtagtagt gttggtgaga gtgtgtctca aacatcagaa	240
aaagatgtgt tgaaggctct gtctcagatt attgatcctg attttgggac agatattggt	300
tcttgtggtt ttgtgaaaga tttggggatt aatgaagctt tgggtgaggt ttcgttccgt	360
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gtttctagtt gcaagggttg tgttgggaaa tcaacagtag ctgtaaatct tgcttataca	600
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&lt;210&gt; 2042

&lt;211&gt; 532

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2042

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Met Pro Leu Leu His Pro Gln Ser Leu Arg His Pro Ser Phe Glu Ile  
1 5 10 15

Gln Thr Gln Arg Arg Ser Asn Ser Thr Thr Arg Leu Leu Leu Ser His  
20 25 30

Lys Phe Leu His Ser Gln Ala Ser Ile Ile Ser Ile Ser Arg Thr Arg  
35 40 45

Ile Leu Lys Arg Val Ser Gln Asn Leu Ser Val Ala Lys Ala Ala Ser  
50 55 60

Ala Gln Ala Ser Ser Ser Val Gly Glu Ser Val Ala Gln Thr Ser Glu  
65 70 75 80

Lys Asp Val Leu Lys Ala Leu Ser Gln Ile Ile Asp Pro Asp Phe Gly  
85 90 95

Thr Asp Ile Val Ser Cys Gly Phe Val Lys Asp Leu Gly Ile Asn Glu  
100 105 110

Ala Leu Gly Glu Val Ser Phe Arg Leu Glu Leu Thr Thr Pro Ala Cys  
115 120 125

Pro Val Lys Asp Met Phe Glu Asn Lys Ala Asn Glu Val Val Ala Ala  
130 135 140

Leu Pro Trp Val Lys Lys Val Asn Val Thr Met Ser Ala Gln Pro Ala  
145 150 155 160

Lys Pro Ile Phe Ala Gly Gln Leu Pro Phe Gly Leu Ser Arg Ile Ser  
165 170 175

Asn Ile Ile Ala Val Ser Ser Cys Lys Gly Gly Val Gly Lys Ser Thr  
180 185 190

Val Ala Val Asn Leu Ala Tyr Thr Leu Ala Gly Met Gly Ala Arg Val  
195 200 205

Gly Ile Phe Asp Ala Asp Val Tyr Gly Pro Ser Leu Pro Thr Met Val  
210 215 220

Asn Pro Glu Ser Arg Ile Leu Glu Met Asn Pro Glu Lys Lys Thr Ile  
225 230 235 240

Ile Pro Thr Glu Tyr Met Gly Val Lys Leu Val Ser Phe Gly Phe Ala  
245 250 255

047-E2F-PCT.ST25.txt

Gly Gln Gly Arg Ala Ile Met Arg Gly Pro Met Val Ser Gly Val Ile  
260 265 270

Asn Gln Leu Leu Thr Thr Thr Glu Trp Gly Glu Leu Asp Tyr Leu Val  
275 280 285

Ile Asp Met Pro Pro Gly Thr Gly Asp Ile Gln Leu Thr Leu Cys Gln  
290 295 300

Val Ala Pro Leu Thr Ala Ala Val Ile Val Thr Thr Pro Gln Lys Leu  
305 310 315

Ala Phe Ile Asp Val Ala Lys Gly Val Arg Met Phe Ser Lys Leu Lys  
325 330 335

Val Pro Cys Val Ala Val Val Glu Asn Met Cys His Phe Asp Ala Asp  
340 345 350

Gly Lys Arg Tyr Tyr Pro Phe Gly Lys Gly Ser Gly Ser Glu Val Val  
355 360 365

Lys Gln Phe Gly Ile Pro His Leu Phe Asp Leu Pro Ile Arg Pro Thr  
370 375 380

Leu Ser Ala Ser Gly Asp Ser Gly Thr Pro Glu Val Val Ser Asp Pro  
385 390 395 400

Leu Ser Asp Val Ala Arg Thr Phe Gln Asp Leu Gly Val Cys Val Val  
405 410 415

Gln Gln Cys Ala Lys Ile Arg Gln Gln Val Ser Thr Ala Val Thr Tyr  
420 425 430

Asp Lys Tyr Leu Lys Ala Ile Arg Val Lys Val Pro Asn Ser Asp Glu  
435 440 445

Glu Phe Leu Leu His Pro Ala Thr Val Arg Arg Asn Asp Arg Ser Ala  
450 455 460

Gln Ser Val Asp Glu Trp Thr Gly Glu Gln Lys Val Leu Tyr Gly Asp  
465 470 475 480

Val Ala Glu Asp Ile Glu Pro Glu Asp Ile Arg Pro Met Gly Asn Tyr  
485 490 495

Ala Val Ser Ile Thr Trp Pro Asp Gly Phe Ser Gln Ile Ala Pro Tyr  
500 505 510

047-E2F-PCT.ST25.txt

Asp Gln Leu Glu Glu Ile Glu Arg Leu Val Asp Val Pro Pro Leu Ser  
515 520 525

Pro Val Glu Val  
530

<210> 2043

<211> 387

<212> DNA

<213> Arabidopsis thaliana

<400> 2043  
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gaattctcag caagggatga tatcgctatc attcttttaa gccaatatat cgccaatatg 240  
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<210> 2044

<211> 128

<212> PRT

<213> Arabidopsis thaliana

<400> 2044

Met Ala Gly Arg Ala Thr Ile Pro Ala Arg Asn Ser Ala Leu Ile Ala  
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Met Ile Ala Asp Glu Asp Thr Val Val Gly Phe Leu Met Ala Gly Val  
20 25 30

Gly Asn Val Asp Ile Arg Arg Lys Thr Asn Tyr Leu Ile Val Asp Ser  
35 40 45

Lys Thr Thr Val Arg Gln Ile Glu Asp Ala Phe Lys Glu Phe Ser Ala  
50 55 60

047-E2F-PCT.ST25.txt

Arg Asp Asp Ile Ala Ile Ile Leu Leu Ser Gln Tyr Ile Ala Asn Met  
65 70 75 80

Ile Arg Phe Leu Val Asp Ser Tyr Asn Lys Pro Val Pro Ala Ile Leu  
85 90 95

Glu Ile Pro Ser Lys Asp His Pro Tyr Asp Pro Ala His Asp Ser Val  
100 105 110

Leu Ser Arg Val Lys Tyr Leu Phe Ser Ala Glu Ser Val Ser Gln Arg  
115 120 125

<210> 2045

<211> 1842

<212> DNA

<213> Arabidopsis thaliana

<400> 2045

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cccaaggaat cccctttctt caggaagaac actgcccaat tcttttctcc tcgaaacac	240
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<210> 2046

<211> 613

<212> PRT

<213> Arabidopsis thaliana

<400> 2046

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Phe Ser Ser Val Arg Asn His Ser Leu Leu Leu Lys Thr Ser His Leu  
 35 40 45

Cys Thr Pro Arg Ser Ala Leu Gly Cys Cys Phe Ser Pro Lys Glu Ser  
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Pro Phe Phe Arg Lys Asn Thr Ala Gln Phe Leu Ser Pro Gln Lys His  
 65 70 75 80

Thr Ser Leu Pro Leu Lys Leu Val Cys Pro Leu Ala Ser Phe Ser Ser  
 85 90 95

047-E2F-PCT.ST25.txt

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 130 135 140  
 His Ile Ser Ser Thr Thr Ala Arg Ala Ile Ser Ile Val Ile Ala Phe  
 145 150 155 160  
 Ser Ala Leu Thr Leu Pro Ile Phe Met Lys Ser Leu Gly Gln Gly Leu  
 165 170 175  
 Ala Leu Lys Thr Lys Leu Leu Ser Tyr Ala Thr Leu Leu Phe Gly Phe  
 180 185 190  
 Tyr Met Ala Trp Asn Ile Gly Ala Asn Asp Val Ala Asn Ala Met Gly  
 195 200 205  
 Thr Ser Val Gly Ser Gly Ala Leu Thr Ile Arg Gln Ala Val Met Thr  
 210 215 220  
 Ala Ala Val Leu Glu Phe Ser Gly Ala Leu Leu Met Gly Thr His Val  
 225 230 235 240  
 Thr Ser Thr Met Gln Lys Gly Ile Leu Met Ala Asn Val Phe Gln Gly  
 245 250 255  
 Lys Asp Met Leu Leu Phe Ala Gly Leu Leu Ser Ser Leu Ala Ala Ala  
 260 265 270  
 Gly Thr Trp Leu Gln Val Ala Ser Tyr Tyr Gly Trp Pro Val Ser Thr  
 275 280 285  
 Thr His Cys Ile Val Gly Ser Met Val Gly Phe Gly Leu Val Tyr Gly  
 290 295 300  
 Gly Ala Gly Ala Val Phe Trp Ser Ser Leu Ala Lys Val Ala Ser Ser  
 305 310 315 320  
 Trp Val Ile Ser Pro Ile Leu Gly Ala Leu Val Ser Phe Leu Val Tyr  
 325 330 335  
 Lys Cys Ile Arg Arg Phe Val Tyr Ser Ala Pro Asn Pro Gly Gln Ala  
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370 375 380

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385 390 395 400

Ile Arg Lys Gln Leu Gly His Leu Leu Ala Lys Thr Lys Ser Pro Glu  
405 410 415

Thr Ser Gln Asn Gln Pro Lys Thr Ile Gly Phe Leu Ser Asp Ile Ala  
420 425 430

Gly Pro Thr Gly Thr Gln Leu Glu Ile Val Tyr Gly Ile Phe Gly Tyr  
435 440 445

Met Gln Val Leu Ser Ala Cys Phe Met Ser Phe Ala His Gly Gly Asn  
450 455 460

Asp Val Ser Asn Ala Ile Gly Pro Leu Ala Ala Ala Leu Ser Ile Leu  
465 470 475 480

Gln Asn Gly Ala Ala Ala Gly Gly Ala Glu Ile Val Ile Pro Met Asp  
485 490 495

Val Leu Ala Trp Gly Gly Phe Gly Ile Val Ala Gly Leu Thr Met Trp  
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Gly Tyr Arg Val Ile Ala Thr Ile Gly Lys Lys Ile Thr Glu Leu Thr  
515 520 525

Pro Thr Arg Gly Phe Ala Ala Glu Phe Ala Ala Ala Ser Val Val Leu  
530 535 540

Phe Ala Ser Lys Leu Gly Leu Pro Ile Ser Ala Thr His Thr Leu Val  
545 550 555 560

Gly Ala Val Met Gly Val Gly Phe Ala Arg Gly Leu Asn Ser Val Arg  
565 570 575

Ala Glu Thr Val Arg Glu Ile Val Ala Ser Trp Leu Val Thr Ile Pro  
580 585 590

Val Gly Ala Thr Leu Ala Val Ile Tyr Thr Trp Ile Phe Thr Lys Ile

595

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&lt;211&gt; 690

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2047

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&lt;210&gt; 2048

&lt;211&gt; 229

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2048

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Ser Glu Ser Asp Ser Asp Phe Met Asp Ser Asp Phe Asp Phe Glu Leu  
 35 40 45

Ser Glu Ser Lys Thr Asn Asn Glu Thr Ser Ala Leu Glu Ala Arg Asn  
 50 55 60

Gly Lys Asp Ile Gln Gly Ile Pro Trp Glu Ser Leu Asn Tyr Thr Arg  
 65 70 75 80

Asp Arg Tyr Arg Glu Asn Arg Leu Leu His Tyr Lys Asn Phe Glu Ser  
 85 90 95

Leu Phe Arg Ser Arg Glu Glu Leu Asp Lys Glu Cys Leu Gln Val Glu  
 100 105 110

Lys Gly Lys Asn Phe Tyr Asp Phe Gln Phe Asn Thr Arg Leu Val Lys  
 115 120 125

Ser Thr Ile Ala His Phe Gln Leu Arg Asn Leu Val Trp Ala Thr Ser  
 130 135 140

Lys His Asp Val Tyr Phe Met Asn Asn Tyr Ser Leu Met His Trp Ser  
 145 150 155 160

Ser Leu Leu Gln Arg Gly Lys Glu Val Leu Asn Val Ala Lys Pro Ile  
 165 170 175

Val Pro Ser Met Lys Gln His Gly Ser Leu Ser Gln Ser Val Ser Arg  
 180 185 190

Val Gln Ile Ser Thr Met Ala Val Lys Asp Asp Leu Lys Leu Arg Glu  
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<210> 2049

<211> 1461

<212> DNA

<213> Arabidopsis thaliana

<400> 2049

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&lt;210&gt; 2050

&lt;211&gt; 486

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2050

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Gln Ile Gln Glu Val Val Gly Lys Gly Ser Tyr Gly Val Val Ala Ser  
 20 25 30

Ala Glu Cys Pro His Thr Gly Gly Lys Val Ala Ile Lys Lys Met Thr  
 35 40 45

Asn Val Phe Glu His Val Ser Asp Ala Ile Arg Ile Leu Arg Glu Ile  
 50 55 60

Lys Leu Leu Arg Leu Leu Arg His Pro Asp Ile Val Glu Ile Lys His  
 65 70 75 80

Ile Met Leu Pro Pro Cys Arg Lys Glu Phe Lys Asp Ile Tyr Val Val  
 85 90 95

Phe Glu Leu Met Glu Ser Asp Leu His His Val Leu Lys Val Asn Asp  
 100 105 110

Asp Leu Thr Pro Gln His His Gln Phe Phe Leu Tyr Gln Leu Leu Arg  
 115 120 125

Gly Leu Lys Phe Met His Ser Ala His Val Phe His Arg Asp Leu Lys  
 130 135 140

Pro Lys Asn Ile Leu Ala Asn Ala Asp Cys Lys Ile Lys Ile Cys Asp  
 145 150 155 160

Leu Gly Leu Ala Arg Val Ser Phe Thr Asp Ser Pro Ser Ala Val Phe  
 165 170 175

Trp Thr Asp Tyr Val Ala Thr Arg Trp Tyr Arg Ala Pro Glu Leu Cys  
 180 185 190

Gly Ser Phe Tyr Ser Asn Tyr Thr Pro Ala Ile Asp Met Trp Ser Val  
 195 200 205

Gly Cys Ile Phe Ala Glu Met Leu Thr Gly Lys Pro Leu Phe Pro Gly  
 210 215 220

Lys Asn Val Val His Gln Leu Glu Leu Val Thr Asp Leu Leu Gly Thr  
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Pro Ser Pro Ile Thr Leu Ser Arg Ile Arg Asn Glu Lys Ala Arg Lys  
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Tyr Leu Gly Asn Met Arg Arg Lys Asp Pro Val Pro Phe Thr His Lys  
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 Pro Ile Ser Lys Leu Glu Phe Glu Phe Glu Arg Arg Lys Leu Thr Arg  
 325 330 335  
 Asp Asp Val Arg Glu Leu Met Tyr Arg Glu Ile Leu Glu Tyr His Pro  
 340 345 350  
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 Phe Leu Tyr Pro Ser Gly Val Asp Gln Phe Lys Gln Glu Phe Ala Arg  
 370 375 380  
 Leu Glu Glu His Asn Asp Asp Glu Glu Glu His Asn Ser Pro Pro His  
 385 390 395 400  
 Gln Arg Lys Tyr Thr Ser Leu Pro Arg Glu Arg Val Cys Ser Ser Glu  
 405 410 415  
 Asp Glu Gly Ser Asp Ser Val His Ala Gln Ser Ser Ser Ala Ser Val  
 420 425 430  
 Val Phe Thr Pro Pro Gln Thr Pro Asn Thr Ala Thr Gly Leu Ser Ser  
 435 440 445  
 Gln Lys Ala Ser Gln Val Asp Lys Ala Ala Thr Pro Val Lys Arg Ser  
 450 455 460  
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 Val Ser Ser Ala Val Ser  
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<210> 2051

&lt;211&gt; 447

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2051

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&lt;210&gt; 2052

&lt;211&gt; 148

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2052

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Val Leu His Lys Ser Lys Gln Lys Ser Gln Asp Leu Arg Asp Pro Lys
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Ala Val Asn Ala Ala Leu Arg Asn Gly Val Ala Val Gln Thr Val Lys
35     40     45
Lys Phe Asp Ala Gly Ser Asn Lys Lys Gly Lys Ser Thr Ala Val Pro
50     55     60
Val Ile Asn Thr Lys Lys Leu Glu Glu Glu Thr Glu Pro Ala Ala Met
65     70     75     80
Asp Arg Val Lys Ala Glu Val Arg Leu Met Ile Gln Lys Ala Arg Leu
85     90     95
Glu Lys Lys Met Ser Gln Ala Asp Leu Ala Lys Gln Ile Asn Glu Arg
Page 2977

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Thr Gln Val Val Gln Glu Tyr Glu Asn Gly Lys Ala Val Pro Asn Gln  
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130 135 140

Lys Ile Gly Lys  
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<211> 759

<212> DNA

<213> Arabidopsis thaliana

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<210> 2054

<211> 252

<212> PRT

<213> Arabidopsis thaliana



&lt;400&gt; 2054

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 20 25 30

Glu Lys Gly Leu Phe Thr Val Val Leu Ser Gly Gly Asp Leu Ile Asp  
 35 40 45

Trp Leu Cys Lys Leu Val Gln Pro Pro Tyr Ile Asp Ser Ile Glu Trp  
 50 55 60

Pro Lys Trp His Val Phe Trp Val Asp Glu Arg Val Cys Ala Trp Glu  
 65 70 75 80

Asp Pro Asp Ser Asn Tyr Lys Leu Ala Met Glu Gly Phe Leu Ser Lys  
 85 90 95

Val Pro Ile Pro Asp Lys Asn Ile Tyr Ala Ile Asp Lys His Leu Ala  
 100 105 110

Ala Asp Gly Asn Ala Glu His Cys Ala Thr Leu Tyr Glu Glu Cys Leu  
 115 120 125

Lys Asn Leu Val Lys Glu Lys Ile Ile Pro Ile Ser Lys Lys Thr Gly  
 130 135 140

Tyr Pro Glu Phe Asp Leu Gln Leu Leu Gly Met Gly Pro Asp Gly His  
 145 150 155 160

Met Ala Ser Leu Phe Pro Asn His Pro Gln Ile Asn Glu Lys Gln Lys  
 165 170 175

Trp Val Thr Tyr Ile Thr Asp Ser Pro Lys Pro Pro Pro Lys Arg Ile  
 180 185 190

Thr Phe Thr Leu Pro Val Ile Asn Ser Thr Leu Tyr Asn Leu Met Ala  
 195 200 205

Ile Cys Asp Lys Ala Pro Ala Lys Ser Val Ala Glu Ile Met Lys His  
 210 215 220

Asn Asn Leu Ser Leu Pro Ser Ala His Leu Ser Ala Gln Val Glu Asn  
 225 230 235 240

Val Trp Tyr Leu Asp Gln Ala Ala Ala Ser Glu Leu  
 Page 2979

<210> 2055  
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<213> *Arabidopsis thaliana*

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<211> 536

<212> PRT

<213> Arabidopsis thaliana

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35 40 45

Trp Lys Glu Ile Ala Ile Arg Cys Ser Ser Arg Ser Val Lys Cys Glu  
50 55 60

Ala Ile Val Ser Asp Asp Ala Ser Pro Phe Leu Lys Ser Thr Pro Lys  
65 70 75 80

Ser Lys Ser Leu Glu Ser Val Lys Leu Phe Val Gly Leu Pro Leu Asp  
85 90 95

Thr Val Ser Asp Cys Asn Asn Val Asn His Leu Lys Ala Ile Thr Ala  
100 105 110

Gly Leu Lys Ala Leu Lys Leu Leu Gly Val Glu Gly Ile Glu Leu Pro  
115 120 125

Ile Phe Trp Gly Val Val Glu Lys Glu Ala Ala Gly Lys Tyr Glu Trp  
130 135 140

Ser Gly Tyr Leu Ala Val Ala Glu Ile Val Lys Lys Val Gly Leu Lys  
145 150 155 160

Leu His Ala Ser Leu Ser Phe His Gly Ser Lys Gln Thr Glu Ile Gly  
165 170 175

Leu Pro Asp Trp Val Ala Lys Ile Gly Asp Ala Glu Pro Gly Ile Tyr

Phe Thr Asp Arg Tyr Gly Gln Gln Tyr Lys Asp Cys Leu Ser Phe Ala  
 195 200  
 Val Asp Asp Val Pro Val Leu Asp Gly Lys Thr Pro Met Glu Val Tyr  
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 405 410 415  
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Gly His Ile Lys Thr Ser Cys Lys Lys Gln Gly Val Val Val Ser Gly  
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Met Gly Ala Leu Phe Phe Ser Pro Glu His Phe His Ala Phe Thr Val  
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<210> 2057

<211> 4497

<212> DNA

<213> Arabidopsis thaliana

<400> 2057

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&lt;211&gt; 1498

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2058

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 35 40 45

Gly Asn Gly Asn Asp Thr Asp Gly Ser Tyr Asp Phe Ile Thr Glu Asn  
 50 55 60

Asp Thr Val Gly Asp Asp Phe Val Glu Ser Asp Tyr Val Lys Pro Val  
 65 70 75 80

Asp Asp Ala Asn Val Glu Lys Asp Leu Lys Glu Gly Glu Asn Val Lys  
 85 90 95

Val Asp Ala Pro Ser Ile Ala Asp Asp Asp Val Leu Gly Val Ser Gln  
 100 105 110

Asp Ser Gln Thr Leu Glu Lys Ser Glu Leu Glu Ser Thr Asp Asp Gly  
 115 120 125

Pro Glu Glu Val Val Glu Ile Pro Lys Ser Glu Val Glu Asp Ser Leu  
 130 135 140

Glu Lys Ser Val Asp Gln Gln His Pro Gly Asn Gly His Leu Glu Ser  
 145 150 155 160

Gly Leu Glu Gly Lys Val Glu Ser Lys Glu Glu Val Glu Gln Leu His  
 165 170 175

Asp Ser Glu Val Gly Ser Lys Asp Leu Thr Lys Asn Asn Val Glu Glu  
 180 185 190

Pro Glu Val Glu Ile Glu Ser Asp Ser Glu Thr Asp Val Glu Gly His  
 195 200 205



Gln Gly Asp Lys Ile Glu Ala Gln Glu Lys Ser Asp Arg Asp Leu Asp  
 210 215 220  
 Val Ser Gln Asp Leu Lys Leu Asn Glu Asn Val Glu Lys His Pro Val  
 225 230 235 240  
 Asp Ser Asp Glu Val Arg Glu Ser Glu Leu Val Ser Ala Lys Val Ser  
 245 250 255  
 Pro Thr Glu Pro Ser Asp Gly Gly Met Asp Leu Gly Gln Pro Thr Val  
 260 265 270  
 Thr Asp Pro Ala Glu Thr Ile Asn Gly Ser Glu Ser Val Asn Asp His  
 275 280 285  
 Val Gly Ser Glu Pro Val Thr Val Leu Glu Pro Val Ser Val Glu Asn  
 290 295 300  
 Gly His Pro Pro Val Glu Ser Glu Leu Glu Arg Ser Ser Asp Val Pro  
 305 310 315 320  
 Phe Thr Ser Val Ala Glu Lys Val Asn Ala Ser Asp Gly Glu Val Leu  
 325 330 335  
 Pro Asp Ser Gly Thr Val Asp Val Val Val Ser Glu Val Ser Ser Asp  
 340 345 350  
 Val Pro Ala Glu Thr Gln Ala Leu Asn Ala Ile Ser Leu Asp Ser Gln  
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 Pro Ser Gly Lys Asp Ser Val Val Glu Asn Gly Asn Ser Lys Ser Glu  
 370 375 380  
 Ser Glu Asp Ser Lys Met Gln Ser Glu Ile Gly Ala Val Asp Asp Gly  
 385 390 395 400  
 Ser Val Ser Asp Gly Ser Ile Asn Thr His Pro Glu Ser Gln Asp Ala  
 405 410 415  
 Ser Asp Pro Thr Cys Asp Gln Gly Gly Lys Gln His Ile Ser Ser Glu  
 420 425 430  
 Val Lys Glu Val Leu Asp Ala Pro Ala Ser Glu Glu Ile Ser Asp Ala  
 435 440 445  
 Val Ile Val Ala Lys Asp Asn Gly Ser Glu Ala Ala Ile Ser Asp Gly

450

455

Leu Ser Cys Thr Asn Gln Gln Gly Ser Glu Ser Asp Glu Ile Ser Gly  
465 470 475 480

Leu Val Glu Lys Leu Pro Ser His Ala Leu His Glu Val Val Ser Ser  
485 490 495

Ala Asn Asp Thr Ser Val Ile Val Ser Asp Asp Thr Lys Ser Gln Gly  
500 505 510

Leu Ser Glu Asp His Gly Val Asp Thr Asn Gln Thr Ile Gln Asp Asp  
515 520 525

Cys Ser Ala Glu Leu Glu Glu Val Thr Asp Val Asn Val Lys His Ala  
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Pro Asn Glu Lys Val Gln Gly Asp Asn Ser Glu Gly Asn Leu Asn Val  
545 550 555 560

Gly Gly Asp Val Cys Leu Asn Ser Ala Glu Glu Ala Lys Glu Leu Pro  
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Thr Gly Asp Leu Ser Gly Asn Ala Ser His Glu Ser Ala Glu Thr Leu  
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Ser Thr Asn Ile Asp Glu Pro Leu Ser Leu Leu Asp Thr Lys Thr Ala  
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Val Ser Asp Phe Ala Glu Ser Ser Ala Gly Val Ala Gly Glu Ile Asp  
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Ala Val Ala Met Glu Ser Glu Ala Ala Gln Ser Ile Lys Gln Cys Ala  
625 630 635 640

Glu Ala His Val Ala Pro Ser Ile Ile Glu Asp Gly Glu Ile Asp Arg  
645 650 655

Glu Val Asn Cys Gly Ser Glu Val Asn Val Thr Lys Thr Thr Pro Val  
660 665 670

Ala Val Arg Glu Asp Ile Pro Pro Lys Glu Val Ser Glu Met Glu Glu  
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Ser Asp Val Lys Glu Arg Ser Ser Ile Asn Thr Asp Glu Glu Val Ala  
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Thr Ala Ser Val Ala Ser Glu Ile Lys Thr Cys Ala Gln Asp Leu Glu  
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Ser Lys Val Val Thr Ser Thr Asp Thr Ile His Thr Gly Ala Lys Asp  
725 730 735

Cys Val Asp Ser Gln Pro Ala Glu Asn Lys Glu Gly Asn Lys Leu Ile  
740 745 750

Lys Asn Glu Ile Arg Leu Cys Thr Ser Leu Val Glu Asn Gln Lys Asp  
755 760 765

Gly Val Asp Ser Ile Tyr Lys Leu Leu Cys Ser Gly Asn Val Val Asp  
770 775 780

Arg Thr Asp Asp Lys Val Ala Ser Thr Gly Glu Val Ser Val Leu Asp  
785 790 795 800

Ala Ser Glu Gly Leu Thr Val Ala Ala Glu Ile Glu Lys Arg Pro Phe  
805 810 815

Tyr Phe Leu Pro Arg Val Pro Arg Tyr Asp Asp Glu Lys Leu Ala Glu  
820 825 830

Gln Leu Lys His Ala Glu Glu Gln Val Asp Gln Lys Thr Gln Asn Arg  
835 840 845

Asp Ala Leu Arg Ala Asp Ile Gln Lys Ile Arg Ala Ile Cys Lys Asp  
850 855 860

Tyr Asp Ile Ser Tyr Lys Ala Val Met Ala Glu Glu Arg Ser Ala Arg  
865 870 875 880

Lys Ala Met His Ser Lys Arg Gln Glu Ile Glu Ala Leu Gln Ser Met  
885 890 895

Ile Ser Arg Val Lys Ser Ala Ala Ser Val Asp Asp Ile Asp Ser Arg  
900 905 910

Val Arg Asn Met Glu His Thr Met Gln His Thr Thr Leu Ser Leu Asn  
915 920 925

Glu Glu Lys Gly Phe Met Arg Glu Ile Lys Gln Leu Lys Gln Leu Arg  
930 935 940

Glu Gln Ile Ser Ser Ser Met Gly Thr Lys Asp Glu Val Lys Gln Ala  
945 950 955 960

047-E2F-PCT.ST25.txt

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 Lys Ala Ala Lys Lys Lys Cys Asp Gly Glu Trp Glu Ala Gln Ser Lys  
 995 1000 1005  
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 1010 1015 1020  
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 Lys Tyr Phe Phe Lys Tyr Arg Asp Asn Ser Arg Ala Ala Ser Glu  
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 1070 1075 1080  
 Phe Arg Lys Tyr Tyr Val Lys Ser Asn Thr Arg Ser Thr Phe Arg  
 1085 1090 1095  
 Arg Leu Gly Thr Leu Asp Gly Arg Ser Leu Gly Pro Asp Glu Glu  
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 Pro Pro Arg Ile Thr Tyr Ala Pro Arg Thr Asp Lys Leu Arg Thr  
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 Lys Glu Val Ala Lys Pro Thr Glu Gln Lys Ser Gln Thr Thr Lys  
 1160 1165 1170  
 Ser Lys Lys Ala Val Lys Pro Asp Gln Pro Pro Ser Ile Val Thr  
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047-E2F-PCT.ST25.txt

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 1265 1270 1275  
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 1280 1285 1290  
 Val Ser Leu Ala Arg Thr Arg Glu Glu Ala Lys Glu Glu Gly Glu  
 1295 1300 1305  
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 1325 1330 1335  
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 1370 1375 1380  
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 1385 1390 1395  
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 1415 1420 1425  
 Leu Asp Phe Pro Ser Leu Phe Lys Asp Arg Ala Glu Lys His Glu  
 Page 2991

1430

1435

1440

Thr Val Pro Pro Val Ser Ala Leu Asp Ser Val Leu Tyr Leu Pro  
1445 1450 1455

Leu His Gln Asn His Leu Arg Asp Gln Ile Leu Glu Gln Ser Met  
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Arg Arg Thr Arg Thr Ala Ser Arg Ser Ser Ala Thr Phe Cys Leu  
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&lt;211&gt; 435

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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&lt;210&gt; 2060

&lt;211&gt; 144

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2060

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Pro Ser Leu Gln Leu Arg Lys Pro Val Met Ala Ala Val Lys Gly Gly  
20 25 30

Lys Gln Ser Val Arg Arg Ser Ser Asn Thr Val Val Gln Ile Thr Cys  
35 40 45

Arg Lys Lys Glu Leu His Pro Glu Phe His Glu Asp Ala Lys Val Tyr  
50 55 60

Cys Asn Gly Glu Leu Val Met Thr Thr Gly Gly Thr Lys Lys Glu Tyr  
65 70 75 80

Val Val Asp Val Trp Ser Gly Asn His Pro Phe Tyr Leu Gly Asn Arg  
85 90 95

Ser Ala Leu Met Val Asp Ala Asp Gln Val Glu Lys Phe Arg Lys Arg  
100 105 110

Phe Ala Gly Leu Ser Glu Ile Met Glu Ile Pro Val Leu Lys Gly Glu  
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Ile Ile Met Pro Thr Lys Lys Ser Lys Gly Pro Lys Gly Lys Lys Lys  
130 135 140

<210> 2061

<211> 1488

<212> DNA

<213> Arabidopsis thaliana

<400> 2061

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ttggcattca acaacatcat catgatggta gccggaaaac gatattacgg taccggtaca	600

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&lt;210&gt; 2062

&lt;211&gt; 495

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2062

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Ser Ile Lys Leu Leu Leu Thr Lys Ser Asn Arg Lys Pro Asn Leu Pro
20           25           30

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Pro Ser Pro Ala Tyr Pro Leu Pro Val Ile Gly His Leu His Leu Leu
35           40           45

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Lys Gln Pro Val His Arg Thr Phe His Ser Ile Ser Lys Ser Leu Gly
50           55           60

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Asn Ala Pro Ile Phe His Leu Arg Leu Gly Asn Arg Leu Val Tyr Val
65           70           75           80

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Val	Leu	Ala	Asn	Arg	Pro	Asp	Ile	Ile	Met	Ala	Lys	His	Val	Gly	Tyr
			100					105					110		
Asn	Phe	Thr	Asn	Met	Ile	Ala	Ala	Ser	Tyr	Gly	Asp	His	Trp	Arg	Asn
			115				120					125			
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His	Leu	Leu	Ser	Phe	Gln	Glu	Thr	Glu	Pro	Glu	Tyr	Tyr	Thr	Asp	Val
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Ile	Ile	Lys	Gly	Ile	Ile	Leu	Ala	Leu	Val	Leu	Ala	Gly	Thr	Asp	Thr
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Ser	Ser	Val	Thr	Leu	Glu	Trp	Ala	Met	Ser	Asn	Leu	Leu	Asn	His	Pro
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Asp Arg Leu Val Glu Glu Ser Asp Ile Val Asn Leu His Tyr Leu Gln  
340 345 350

Asn Ile Val Ser Glu Thr Leu Arg Leu Tyr Pro Ala Val Pro Leu Leu  
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Leu Pro His Phe Ser Ser Asp Glu Cys Lys Val Ala Gly Tyr Asp Met  
370 375 380

Pro Arg Arg Thr Leu Leu Leu Thr Asn Val Trp Ala Met His Arg Asp  
385 390 395 400

Pro Gly Leu Trp Glu Glu Pro Glu Arg Phe Lys Pro Glu Arg Phe Glu  
405 410 415

Lys Glu Gly Glu Ala Arg Lys Leu Met Pro Phe Gly Met Gly Arg Arg  
420 425 430

Ala Cys Pro Gly Ala Glu Leu Gly Lys Arg Leu Val Ser Leu Ala Leu  
435 440 445

Gly Cys Leu Ile Gln Ser Phe Glu Trp Glu Arg Val Gly Ala Glu Leu  
450 455 460

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<211> 2568

<212> DNA

<213> Arabidopsis thaliana

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tccgatgagg aggatgacaa tgtggagcag cgtttgattc gcactagccc tgccgttgac 240  
tctttcgtat tagatgctct tgagattcct ggaactcaga aaacgaaat cgaggacact 300  
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047-E2F-PCT.ST25.txt

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<210> 2064

<211> 855

<212> PRT

<213> Arabidopsis thaliana

<400> 2064

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Val Phe Asp Glu Lys Asp Asp Tyr Glu Val Asn Glu Asp Tyr Asp Asp  
35 40 45

Asp Gly Tyr Asp Glu His Asn His Pro Glu Met Asp Ser Asp Glu Glu  
50 55 60

Asp Asp Asn Val Glu Gln Arg Leu Ile Arg Thr Ser Pro Ala Val Asp  
65 70 75 80

Ser Phe Asp Val Asp Ala Leu Glu Ile Pro Gly Thr Gln Lys Asn Glu  
85 90 95

Ile Glu Asp Thr Gly Ile Gly Lys Lys Leu Ile Leu Ala Leu Gln Thr  
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Leu Gly Val Val Phe Gly Asp Ile Gly Thr Ser Pro Leu Tyr Thr Phe  
115 120 125

Thr Val Met Phe Arg Arg Ser Pro Ile Asn Asp Lys Glu Asp Ile Ile  
130 135 140

Gly Ala Leu Ser Leu Val Ile Tyr Thr Leu Ile Leu Ile Pro Leu Val  
145 150 155 160

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Lys Tyr Val His Phe Val Leu Trp Ala Asn Asp Asp Gly Glu Gly Gly  
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 Thr Phe Ala Leu Tyr Ser Leu Ile Cys Arg His Ala Asn Val Ser Leu  
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 Ile Pro Asn Gln Leu Pro Ser Asp Ala Arg Ile Ser Gly Phe Gly Leu  
 195 200 205  
 Lys Val Pro Ser Pro Glu Leu Glu Arg Ser Leu Ile Ile Lys Glu Arg  
 210 215 220  
 Leu Glu Ala Ser Met Ala Leu Lys Lys Leu Leu Leu Ile Leu Val Leu  
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 Ala Gly Thr Ala Met Val Ile Ala Asp Ala Val Val Thr Pro Ala Met  
 245 250 255  
 Ser Val Met Ser Ala Ile Gly Gly Leu Lys Val Gly Val Gly Val Ile  
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 Glu Gln Asp Gln Val Val Val Ile Ser Val Ser Phe Leu Val Ile Leu  
 275 280 285  
 Phe Ser Val Gln Lys Tyr Gly Thr Ser Lys Leu Gly Leu Val Leu Gly  
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 Pro Ala Leu Leu Leu Trp Phe Phe Cys Leu Ala Gly Ile Gly Ile Tyr  
 305 310 315  
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 325 330 335  
 Tyr Ile Tyr Phe Phe Phe Lys Arg Asn Ser Val Asn Ala Trp Tyr Ala  
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 Asp Leu Ser Tyr Phe Ser Val His Ser Ile Gln Leu Thr Phe Ile Leu  
 370 375 380  
 Leu Val Leu Pro Cys Leu Leu Leu Gly Tyr Leu Gly Gln Ala Ala Tyr  
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Pro Ser Ser Leu Phe Trp Pro Val Phe Leu Ile Ser Asn Val Ala Ala  
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Leu Ile Ala Ser Arg Ala Met Thr Thr Ala Thr Phe Thr Cys Ile Lys  
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Gln Ser Ile Ala Leu Gly Cys Phe Pro Arg Leu Lys Ile Ile His Thr  
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Ser Lys Lys Phe Ile Gly Gln Ile Tyr Ile Pro Val Leu Asn Trp Ser  
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Leu Leu Val Val Cys Leu Ile Val Val Cys Ser Thr Ser Asn Ile Phe  
485 490 495

Ala Ile Gly Asn Ala Tyr Gly Ile Ala Glu Leu Gly Ile Met Met Thr  
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Thr Thr Ile Leu Val Thr Leu Ile Met Leu Leu Ile Trp Gln Thr Asn  
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Ile Ile Val Val Ser Met Phe Ala Ile Val Ser Leu Ile Val Glu Leu  
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Ile Leu Val Phe Ala Thr Ile Met Phe Leu Ile Met Phe Val Trp Asn  
565 570 575

Tyr Gly Ser Lys Leu Lys Tyr Glu Thr Glu Val Gln Lys Lys Leu Pro  
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Met Asp Leu Leu Arg Glu Leu Gly Ser Asn Leu Gly Thr Ile Arg Ala  
595 600 605

Pro Gly Ile Gly Leu Leu Tyr Asn Glu Leu Ala Lys Gly Val Pro Ala  
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Ile Phe Gly His Phe Leu Thr Thr Leu Pro Ala Ile His Ser Met Val  
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Ile Phe Val Cys Ile Lys Tyr Val Pro Val Pro Ser Val Pro Gln Thr  
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Glu Arg Phe Leu Phe Arg Arg Val Cys Pro Arg Ser Tyr His Leu Phe  
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Arg Cys Val Ala Arg Tyr Gly Tyr Lys Asp Val Arg Lys Glu Ser His  
675 680 685

Gln Ala Phe Glu Gln Ile Leu Ile Glu Ser Leu Glu Lys Phe Ile Arg  
690 695 700

Lys Glu Ala Gln Glu Arg Ala Leu Glu Ser Asp Gly Asp His Asn Asp  
705 710 715 720

Thr Asp Ser Glu Asp Asp Thr Thr Leu Ser Arg Val Leu Ile Ala Pro  
725 730 735

Asn Gly Ser Val Tyr Ser Leu Gly Val Pro Leu Leu Ala Glu His Met  
740 745 750

Asn Ser Ser Asn Lys Arg Pro Met Glu Arg Arg Lys Ala Ser Ile Asp  
755 760 765

Phe Gly Ala Gly Pro Ser Ser Ala Leu Asp Val Glu Gln Ser Leu Glu  
770 775 780

Lys Glu Leu Ser Phe Ile His Lys Ala Lys Glu Ser Gly Val Val Tyr  
785 790 795 800

Leu Leu Gly His Gly Asp Ile Arg Ala Thr Lys Asp Ser Trp Phe Leu  
805 810 815

Lys Lys Leu Val Ile Asn Tyr Leu Tyr Ala Phe Leu Arg Lys Asn Ser  
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Arg Arg Gly Ile Thr Asn Leu Ser Val Pro His Thr His Leu Met Gln  
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<211> 1398

<212> DNA

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&lt;210&gt; 2066

&lt;211&gt; 465

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2066

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 50 55 60  
 Val Gly Pro Cys Ser Leu Asp Ser His Ser Leu Lys Leu Thr Lys Leu  
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 Thr Leu Leu Glu Thr Glu Asp Ser Ile Asp Leu Val Glu Cys Leu Glu  
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 145 150 155 160  
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 Glu Tyr Met Lys Ala Glu Arg Asp Ile Leu Thr Lys Ile Asp His Pro  
 180 185 190  
 Phe Ile Val Gln Leu Lys Tyr Ser Phe Gln Thr Lys Tyr Arg Leu Tyr  
 195 200 205  
 Leu Val Leu Asp Phe Ile Asn Gly Gly His Leu Phe Phe Gln Leu Tyr  
 210 215 220  
 His Gln Gly Leu Phe Arg Glu Asp Leu Ala Arg Val Tyr Thr Ala Glu  
 225 230 235 240  
 Ile Val Ser Ala Val Ser His Leu His Glu Lys Gly Ile Met His Arg  
 245 250 255  
 Asp Leu Lys Pro Glu Asn Ile Leu Met Asp Thr Asp Gly His Val Met  
 Page 3003

Leu Thr Asp Phe Gly Leu Ala Lys Glu Phe Glu Glu Asn Thr Arg Ser  
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Asn Ser Met Cys Gly Thr Thr Glu Tyr Met Ala Pro Glu Ile Val Arg  
 290 295 300

Gly Lys Gly His Asp Lys Ala Ala Asp Trp Trp Ser Val Gly Ile Leu  
 305 310 315 320

Leu Tyr Glu Met Leu Thr Gly Lys Pro Pro Phe Leu Gly Ser Lys Gly  
 325 330 335

Lys Ile Gln Gln Lys Ile Val Lys Asp Lys Ile Lys Leu Pro Gln Phe  
 340 345 350

Leu Ser Asn Glu Ala His Ala Ile Leu Lys Gly Leu Leu Gln Lys Glu  
 355 360 365

Pro Glu Arg Arg Leu Gly Ser Gly Leu Ser Gly Ala Glu Glu Ile Lys  
 370 375 380

Gln His Lys Trp Phe Lys Gly Ile Asn Trp Lys Lys Leu Glu Ala Arg  
 385 390 395 400

Glu Val Met Pro Ser Phe Lys Pro Glu Val Ser Gly Arg Gln Cys Ile  
 405 410 415

Ala Asn Phe Asp Lys Cys Trp Thr Asp Met Ser Val Leu Asp Ser Pro  
 420 425 430

Ala Ser Ser Pro Ser Ser Asp Pro Lys Ala Asn Pro Phe Thr Asn Phe  
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Thr Tyr Val Arg Pro Pro Pro Ser Phe Leu His Gln Ser Thr Thr Thr  
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<211> 912

<212> DNA

<213> Arabidopsis thaliana

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<210> 2068

<211> 303

<212> PRT

<213> Arabidopsis thaliana

<400> 2068

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 35           40           45
Ala Ile Glu Leu Phe Trp Ile Ala Ile Lys Ala Arg Asp Arg Val Asp
 50           55           60

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Ser Ala Leu Lys Asp Met Ala Leu Leu Met Lys Gln Gln Asn Arg Ala  
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Glu Glu Ala Ile Asp Ala Ile Gln Ser Phe Arg Asp Leu Cys Ser Arg  
85 90 95

Gln Ala Gln Glu Ser Leu Asp Asn Val Leu Ile Asp Leu Tyr Lys Lys  
100 105 110

Cys Gly Arg Ile Glu Glu Gln Val Glu Leu Leu Lys Gln Lys Leu Trp  
115 120 125

Met Ile Tyr Gln Gly Glu Ala Phe Asn Gly Lys Pro Thr Lys Thr Ala  
130 135 140

Arg Ser His Gly Lys Lys Phe Gln Val Thr Val Glu Lys Glu Thr Ser  
145 150 155 160

Arg Ile Leu Gly Asn Leu Gly Trp Ala Tyr Met Gln Leu Met Asp Tyr  
165 170 175

Thr Ala Ala Glu Ala Val Tyr Arg Lys Ala Gln Leu Ile Glu Pro Asp  
180 185 190

Ala Asn Lys Ala Cys Asn Leu Cys Thr Cys Leu Ile Lys Gln Gly Lys  
195 200 205

His Asp Glu Ala Arg Ser Ile Leu Phe Arg Asp Val Leu Met Glu Asn  
210 215 220

Lys Glu Gly Ser Gly Asp Pro Arg Leu Met Ala Arg Val Gln Glu Leu  
225 230 235 240

Leu Ser Glu Leu Lys Pro Gln Glu Glu Glu Ala Ala Ala Ser Val Ser  
245 250 255

Val Glu Cys Glu Val Gly Ile Asp Glu Ile Ala Val Val Glu Gly Leu  
260 265 270

Asp Glu Phe Val Lys Glu Trp Arg Arg Pro Tyr Arg Thr Arg Arg Leu  
275 280 285

Pro Ile Phe Glu Glu Ile Leu Pro Leu Arg Asp Gln Leu Ala Cys  
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<210> 2069

&lt;211&gt; 705

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2069

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&lt;210&gt; 2070

&lt;211&gt; 234

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2070

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Thr Tyr 50 Gln Arg Gln Glu 55 Ile Glu Gln Val Asn 60 Asp Phe Lys Asn His

Gln Leu Pro Leu Ala Arg Ile Lys Lys Ile Met Lys Ala Asp Glu Asp
Page 3007

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65 Val Arg Met Ile Ser<sub>85</sub> Ala Glu Ala Pro Ile<sub>90</sub> Leu Phe Ala Lys Ala<sub>95</sub> Cys

Glu Leu Phe Ile<sub>100</sub> Leu Glu Leu Thr Ile<sub>105</sub> Arg Ser Trp Leu His<sub>110</sub> Ala Glu

Glu Asn Lys<sub>115</sub> Arg Arg Thr Leu Gln<sub>120</sub> Lys Asn Asp Ile<sub>125</sub> Ala Ala Ile

Thr Arg<sub>130</sub> Thr Asp Ile Phe Asp<sub>135</sub> Phe Leu Val Asp Ile<sub>140</sub> Val Pro Arg Asp

Glu Ile Lys Asp Glu Ala<sub>150</sub> Ala Val Leu Gly Gly<sub>155</sub> Gly Met Val Val Ala<sub>160</sub>

Pro Thr Ala Ser Gly<sub>165</sub> Val Pro Tyr Tyr Tyr<sub>170</sub> Pro Pro Met Gly Gln<sub>175</sub> Pro

Ala Gly Pro Gly<sub>180</sub> Gly Met Met Ile Gly<sub>185</sub> Arg Pro Ala Met Asp<sub>190</sub> Pro Asn

Gly Val Tyr<sub>195</sub> Val Gln Pro Pro Ser<sub>200</sub> Gln Ala Trp Gln Ser<sub>205</sub> Val Trp Gln

Thr Ser<sub>210</sub> Thr Gly Thr Gly Asp<sub>215</sub> Asp Val Ser Tyr Gly<sub>220</sub> Ser Gly Gly Ser

Ser<sub>225</sub> Gly Gln Gly Asn Leu<sub>230</sub> Asp Gly Gln Gly

<210> 2071

<211> 1317

<212> DNA

<213> Arabidopsis thaliana

<400>	2071	
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<210> 2072

<211> 438

<212> PRT

<213> Arabidopsis thaliana

<400> 2072

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		20					25						30		

Ala	Leu	Thr	Met	Ser	Met	Asn	Leu	Lys	Thr	His	Ala	Phe	Ala	Gly	Asn
		35				40						45			

Pro	Leu	Lys	Ser	Lys	Thr	Pro	Lys	Ser	Thr	Asp	Pro	Phe	Ser	Pro	Thr
	50					55					60				

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Ser Ala Phe Glu Ser Leu Lys Thr Leu Ile Pro Val Ile Pro Asn His  
65 70 75 80

Ser Thr Pro Ser Pro Asp Phe Lys Val Leu Pro Phe Ser Lys Gly Arg  
85 90 95

Pro Leu Val Phe Ser Ser Gly Gly Asp Ala Asn Thr Thr Pro Ile Trp  
100 105 110

His Leu Gly Trp Val Ser Leu Ala Asp Cys Lys Val Leu Leu Ala Ser  
115 120 125

Cys Gly Val Asp Leu Asn Glu Asp Ser Leu Val Tyr Leu Gly Pro Lys  
130 135 140

Leu Glu Glu Asp Leu Val Tyr Trp Ala Val Asp Leu Ala Glu Asp Gly  
145 150 155 160

Phe Val Ser Glu Leu Gly Gly Arg Lys Leu Cys Phe Val Glu Leu Arg  
165 170 175

Thr Leu Met Val Ala Ala Asp Trp Ala Asp Gln Arg Ala Met Asp Glu  
180 185 190

Leu Ala Ile Ala Gly Asn Ala Arg Ala Leu Leu Glu Trp His Asn Val  
195 200 205

Ser Gln Phe Cys Gly Ser Cys Gly Ser Lys Thr Phe Pro Lys Glu Ala  
210 215 220

Gly Arg Arg Lys Gln Cys Ser Asp Glu Thr Cys Arg Lys Arg Val Tyr  
225 230 235 240

Pro Arg Val Asp Pro Val Val Ile Met Leu Val Ile Asp Arg Glu Asn  
245 250 255

Asp Arg Ala Leu Leu Ser Arg Gln Ser Arg Tyr Val Pro Arg Met Trp  
260 265 270

Ser Cys Leu Ala Gly Phe Ile Glu Pro Gly Glu Ser Leu Glu Glu Ala  
275 280 285

Val Arg Arg Glu Thr Trp Glu Glu Thr Gly Ile Glu Val Gly Asp Val  
290 295 300

Val Tyr His Ser Ser Gln Pro Trp Pro Val Gly Pro Ser Ser Met Pro  
305 310 315 320



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Cys Gln Leu Met Leu Gly Phe Phe Ala Phe Ala Lys Thr Leu Asp Ile  
325 330 335

Asn Val Asp Lys Glu Glu Leu Glu Asp Ala Gln Trp His Ser Arg Glu  
340 345 350

Glu Val Lys Lys Ala Leu Ala Val Ala Glu Tyr Arg Lys Ala Gln Arg  
355 360 365

Thr Ala Ala Ala Lys Val Glu Gln Ile Cys Lys Gly Val Glu Arg Ser  
370 375 380

Gln Ser Leu Ser Thr Asp Phe Asn Leu Glu Ser Gly Glu Leu Ala Pro  
385 390 395 400

Met Phe Ile Pro Gly Pro Phe Ala Ile Ala His His Leu Ile Ser Ala  
405 410 415

Trp Val Asn Gln Ala Pro Asp Asp Val His Ser Lys Gln Gln Ala Gly  
420 425 430

Val Ser Leu Ser Ser Leu  
435

<210> 2073

<211> 816

<212> DNA

<213> Arabidopsis thaliana

<400> 2073  
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cttcccgcc ccgcaacctg gtacggaagt gccgagggag acggcagcag cggaggagct 180  
tgtgggtacg gatcggttgg ggacgtgaag ccgtttaagg ctagagtcgg agcggtagt 240  
ccgattctgt tcaaaagggtg tgaaggctgc ggtgcatgct acaaggctcag gtgtctcgac 300  
aagaccattt gctctaagag agcagtcacc attattgcca ccgaccagtc accgtcagga 360  
ccatctgcta aagcaaaaca cactcatttc gacctcagtg gcgccgcctt tggacatatg 420  
gctattcccg gccataacgg tgatcatccg aaccgtggcc tattaacat cctctaccgc 480  
cgacggcat gcaaatacag agggaagaac atagcgtttc atgtgaacgc aggatcaact 540

gattattggt tatcgcttct cattgagtat gaagacgggtg aaggagacat tggctctatg 600  
 cacattcgtc aagcggggtc taaggagtgg atatcgatga agcacatatg gggagcgaac 660  
 tgggtgcatcg tcgaaggacc actcaaggga ccattctccg tgaagctcac aactttgtcc 720  
 aacaataaga cactctccgc caccgacgtc atccccagta actgggttcc caaagctact 780  
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<210> 2074

<211> 271

<212> PRT

<213> Arabidopsis thaliana

<400> 2074

Met Gln Leu Phe Pro Val Ile Leu Pro Thr Leu Cys Val Phe Leu His  
 1 5 10 15

Leu Leu Ile Ser Gly Ser Gly Ser Thr Pro Pro Leu Thr His Ser Asn  
 20 25 30

Gln Gln Val Ala Ala Thr Arg Trp Leu Pro Ala Thr Ala Thr Trp Tyr  
 35 40 45

Gly Ser Ala Glu Gly Asp Gly Ser Ser Gly Gly Ala Cys Gly Tyr Gly  
 50 55 60

Ser Leu Val Asp Val Lys Pro Phe Lys Ala Arg Val Gly Ala Val Ser  
 65 70 75 80

Pro Ile Leu Phe Lys Gly Gly Glu Gly Cys Gly Ala Cys Tyr Lys Val  
 85 90 95

Arg Cys Leu Asp Lys Thr Ile Cys Ser Lys Arg Ala Val Thr Ile Ile  
 100 105 110

Ala Thr Asp Gln Ser Pro Ser Gly Pro Ser Ala Lys Ala Lys His Thr  
 115 120 125

His Phe Asp Leu Ser Gly Ala Ala Phe Gly His Met Ala Ile Pro Gly  
 130 135 140

His Asn Gly Val Ile Arg Asn Arg Gly Leu Leu Asn Ile Leu Tyr Arg  
 145 150 155 160

Arg Thr Ala Cys Lys Tyr Arg Gly Lys Asn Ile Ala Phe His Val Asn  
 165 170 175

Ala Gly Ser Thr Asp Tyr Trp Leu Ser Leu Leu Ile Glu Tyr Glu Asp  
 180 185 190

Gly Glu Gly Asp Ile Gly Ser Met His Ile Arg Gln Ala Gly Ser Lys  
 195 200 205

Glu Trp Ile Ser Met Lys His Ile Trp Gly Ala Asn Trp Cys Ile Val  
 210 215 220

Glu Gly Pro Leu Lys Gly Pro Phe Ser Val Lys Leu Thr Thr Leu Ser  
 225 230 235 240

Asn Asn Lys Thr Leu Ser Ala Thr Asp Val Ile Pro Ser Asn Trp Val  
 245 250 255

Pro Lys Ala Thr Tyr Thr Ser Arg Leu Asn Phe Ser Pro Val Leu  
 260 265 270

<210> 2075

<211> 699

<212> DNA

<213> Arabidopsis thaliana

<400> 2075

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tcgtgtaaca gaatcgaatg cccgagctac gagctggttc actccggaaa tggatacgaa	180
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gttgatgcta ccagaaccgc tttcttccaa ttgtttgcat acattcaggg gaagaacgag	300
tatcatcaga agatagaaat gactgctcgg gttatctctc aagtctcacc aagcgacggt	360
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ccagctccgt cggagaatct ccacattcag aaatggaact ctaggtagct ggccgtgaga	480
caattcagtg gattcgtgtc tgatgatagc ataggagaac aagcggcggc gctagactcg	540
agcctcaaag gtacggcttg ggctaagca atagcgaaaa gcaagaaga cggtggtgtt	600
gggtcggatt cagcttacac ggtcgctcag tataactcac ctttcgagtt ctccggctcg	660
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<210> 2076

<211> 232

<212> PRT

<213> *Arabidopsis thaliana*

<400> 2076

Met Ala Thr Gly Leu Gly Phe Phe Lys Leu Ser Phe Leu Leu Ser Leu  
1 5 10 15

Leu Ser Gly Gly Ser Asp Leu Leu Gly Pro Asp Ala Glu Ser Gly Val  
20 25 30

Ala Gln Ile Gly Lys Phe Pro Pro Ser Cys Asn Arg Ile Glu Cys Pro  
35 40 45

Ser Tyr Glu Leu Val His Ser Gly Asn Gly Tyr Glu Ile Arg Arg Tyr  
50 55 60

Asn Asn Thr Val Trp Val Ser Thr Glu Pro Ile Pro Asp Ile Ser Leu  
65 70 75 80

Val Asp Ala Thr Arg Thr Ala Phe Phe Gln Leu Phe Ala Tyr Ile Gln  
85 90 95

Gly Lys Asn Glu Tyr His Gln Lys Ile Glu Met Thr Ala Pro Val Ile  
100 105 110

Ser Gln Val Ser Pro Ser Asp Gly Pro Phe Cys Glu Ser Ser Phe Thr  
115 120 125

Val Ser Phe Tyr Val Pro Lys Lys Asn Gln Pro Asp Pro Ala Pro Ser  
130 135 140

Glu Asn Leu His Ile Gln Lys Trp Asn Ser Arg Tyr Val Ala Val Arg  
145 150 155 160

Gln Phe Ser Gly Phe Val Ser Asp Asp Ser Ile Gly Glu Gln Ala Ala  
165 170 175

Ala Leu Asp Ser Ser Leu Lys Gly Thr Ala Trp Ala Asn Ala Ile Ala  
180 185 190

Lys Ser Lys Glu Asp Gly Gly Val Gly Ser Asp Ser Ala Tyr Thr Val  
195 200 205

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Ala Gln Tyr Asn Ser Pro Phe Glu Phe Ser Gly Arg Val Asn Glu Ile  
210 215 220

Trp Leu Pro Phe Glu Leu Asp Val  
225 230

<210> 2077

<211> 576

<212> DNA

<213> Arabidopsis thaliana

<400> 2077  
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cttcttcata atgttaacaa gatgagagca aaggcctgtg atatacttgg agcaaagaag 180  
acaatcttgg cagctcaact cggggcagtt cttgccacga ttgaccatcc agccttagca 240  
ataacaggag ttaacaacca gcaggaattg agcagtggtg tgctcgatat cgggatcata 300  
tccgttttgt acttcctagt aatgccacca atcatcatga actggctaag agtaagatgg 360  
tacagaagga agttcttcga gatgtattta cagttcatgt tcgtcttcat gttcttcccc 420  
gggctactgt tatgggcacc atttctcaac ttcaggaagt tcccaagaga tcctaataatg 480  
aagaatcctt gggacaaacc aacagaccca gactctataa agaacgttta cctcaaatac 540  
ccatattgca cgccagaaga ttacgatctc gattaa 576

<210> 2078

<211> 191

<212> PRT

<213> Arabidopsis thaliana

<400> 2078

Met Ser Arg Cys Gly Ser Leu Gly Leu Tyr Ala Pro Asn Ala Leu Pro  
1 5 10 15

Ser Leu Ser Leu Lys Pro Arg Ser Val Lys Ser Pro Phe Cys Ile Thr  
20 25 30

Ser His Thr Lys Pro Asn Asp Thr Leu Leu His Asn Val Asn Lys Met  
Page 3015

Arg Ala Lys Ala Cys Asp Ile Leu Gly Ala Lys Lys Thr Ile Leu Ala  
50 55 60  
Ala Gln Leu Gly Ala Val Leu Ala Thr Ile Asp His Pro Ala Leu Ala  
65 70 75 80  
Ile Thr Gly Val Asn Asn Gln Gln Glu Leu Ser Ser Val Val Leu Asp  
85 90 95  
Ile Gly Ile Ile Ser Val Trp Tyr Phe Leu Val Met Pro Pro Ile Ile  
100 105 110  
Met Asn Trp Leu Arg Val Arg Trp Tyr Arg Arg Lys Phe Phe Glu Met  
115 120 125  
Tyr Leu Gln Phe Met Phe Val Phe Met Phe Phe Pro Gly Leu Leu Leu  
130 135 140  
Trp Ala Pro Phe Leu Asn Phe Arg Lys Phe Pro Arg Asp Pro Asn Met  
145 150 155 160  
Lys Asn Pro Trp Asp Lys Pro Thr Asp Pro Asp Ser Ile Lys Asn Val  
165 170 175  
Tyr Leu Lys Tyr Pro Tyr Ala Thr Pro Glu Asp Tyr Asp Leu Asp  
180 185 190

<210> 2079

<211> 903

<212> DNA

<213> Arabidopsis thaliana

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cgcttttctt tgaattcgcg ttccacttcg aaatctctta ttactgcat gtccaatggt 180  
accgccgatg tgcttctgt atcagagaca aagtcgaaat tcctaaaagc ttacaagcga 240  
cccatccga gtatctacaa cacggttttg caggagctca ttgtccagca gcatttgatg 300  
aggtataaga agacttatcg ttatgatcct gtttttgccc ttggatttgt cactgtatat 360  
gatcagctca tggaaggata tccgagtgat caagaccgag atgccatttt taaggcttac 420

## 047-E2F-PCT.ST25.txt

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 tgggcacgaa gtcagacttc tgcttacta gttgactttt cctctaaaga aggagatatt 540  
 gaagcagttc ttaaggacat tgcaggaaga gctggtagta aggaggggtt tagttacagc 600  
 aggttcttcg ctgttgggct ctttcgtttg cttgagcttg caagtgtcac tgatccaact 660  
 gtcttggaac agctttgtgc atccctaata atcaacaaga aaagcgtgga tcgggacgtg 720  
 gatgtgtatc gtaacctgct ttcaaagctt gtccaagcca aggaattgct taaggagtat 780  
 gtcgagaggg agaagaagaa gcaaggagaa agagcccaat ctcagaaggc taacgaaaca 840  
 atctccaagt gtctgggaga tactctatat aaccatcttt tcttggttga acggaatctt 900  
 tag 903

&lt;210&gt; 2080

&lt;211&gt; 300

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2080

Met Ala Ala Thr Ala Ile Ser Ser Leu Ser Phe Pro Ala Leu Gly Gln  
 1 5 10 15

Ser Asp Lys Ile Ser Asn Phe Ala Ser Ser Arg Pro Leu Ala Ser Ala  
 20 25 30

Ile Arg Ile Cys Thr Lys Phe Ser Arg Leu Ser Leu Asn Ser Arg Ser  
 35 40 45

Thr Ser Lys Ser Leu Ile His Cys Met Ser Asn Val Thr Ala Asp Val  
 50 55 60

Pro Pro Val Ser Glu Thr Lys Ser Lys Phe Leu Lys Ala Tyr Lys Arg  
 65 70 75 80

Pro Ile Pro Ser Ile Tyr Asn Thr Val Leu Gln Glu Leu Ile Val Gln  
 85 90 95

Gln His Leu Met Arg Tyr Lys Lys Thr Tyr Arg Tyr Asp Pro Val Phe  
 100 105 110

Ala Leu Gly Phe Val Thr Val Tyr Asp Gln Leu Met Glu Gly Tyr Pro  
 115 120 125

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Ser Asp Gln Asp Arg Asp Ala Ile Phe Lys Ala Tyr Ile Glu Ala Leu  
130 135 140

Asn Glu Asp Pro Lys Gln Tyr Arg Ile Asp Ala Gln Lys Met Glu Glu  
145 150 155 160

Trp Ala Arg Ser Gln Thr Ser Ala Ser Leu Val Asp Phe Ser Ser Lys  
165 170 175

Glu Gly Asp Ile Glu Ala Val Leu Lys Asp Ile Ala Gly Arg Ala Gly  
180 185 190

Ser Lys Glu Gly Phe Ser Tyr Ser Arg Phe Phe Ala Val Gly Leu Phe  
195 200 205

Arg Leu Leu Glu Leu Ala Ser Ala Thr Asp Pro Thr Val Leu Asp Lys  
210 215 220

Leu Cys Ala Ser Leu Asn Ile Asn Lys Lys Ser Val Asp Arg Asp Leu  
225 230 235 240

Asp Val Tyr Arg Asn Leu Leu Ser Lys Leu Val Gln Ala Lys Glu Leu  
245 250 255

Leu Lys Glu Tyr Val Glu Arg Glu Lys Lys Lys Gln Gly Glu Arg Ala  
260 265 270

Gln Ser Gln Lys Ala Asn Glu Thr Ile Ser Lys Cys Leu Gly Asp Thr  
275 280 285

Leu Tyr Asn Pro Ser Phe Leu Val Glu Arg Lys Ser  
290 295 300

<210> 2081

<211> 909

<212> DNA

<213> Arabidopsis thaliana

<400> 2081  
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gtctctgtta tgatccttct cgctaatttc acggtttact ctattgagag caactctgct 120  
ttagccgccg ccgtaagtcc cccgacaacc ctctctttca gcttcgaac gacggcggag 180  
ataagtgaac ctcaagaac gaatcagaaa ttcgattctt caatgggttaa gacgttctct 240



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gtttcttctc cttacgggaa aacatctttt gtcggtggtg gcggcgggaa caatatacca 300  
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 tcatcatcgt ctctgggtgc aacaagtgcg gattcagatg tatctgtgtc agggcaagaa 420  
 gagatcagac tgtggaattc gatattggag gaaactgcga aaatggaac gtgggatcac 480  
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 gaaaagtatt tcaagagagc agcaaaaagc gagccagcgg acgcagaggc attgaacaaa 720  
 tatgcgacgt ttctgtggag agcgagaaac gatatttgga gagcggagga aacctactta 780  
 gaagcgatct ccgctgatcc acaaaactca gtctactcgg caaactacgc acatttcctc 840  
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<210> 2082

<211> 302

<212> PRT

<213> Arabidopsis thaliana

<400> 2082

Met Gln Ala Ser Phe Val Trp Leu Phe Gln Gln Val Phe Ser Ala Thr  
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Pro Thr Leu Met Val Ser Val Met Ile Leu Leu Ala Asn Phe Thr Val  
 20 25 30

Tyr Ser Ile Glu Ser Asn Ser Ala Leu Ala Ala Ala Val Ser Pro Pro  
 35 40 45

Thr Thr Leu Ser Phe Ser Phe Glu Thr Thr Ala Glu Ile Ser Glu Thr  
 50 55 60

Gln Glu Thr Asn Gln Lys Phe Asp Ser Ser Met Val Lys Thr Phe Ser  
 65 70 75 80

Val Ser Ser Pro Tyr Gly Lys Thr Ser Phe Val Gly Gly Gly Gly Gly  
 85 90 95

Asn Asn Ile Pro Pro Pro Val Gln Ser Gly Thr Asp Gly Asp Gly Ser

Asp Gln Phe Arg Lys Ser Gln Phe Ser Ser Ser Ser Leu Gly Ala Thr  
 115 120 125

Ser Ala Asp Ser Asp Val Ser Val Ser Gly Gln Glu Glu Ile Arg Leu  
 130 135 140

Trp Asn Ser Ile Leu Glu Glu Thr Ala Lys Met Glu Thr Leu Asp His  
 145 150 155 160

Glu Thr Met Lys Gly Met Val Ser Pro Val Glu Ala Arg Leu Glu Ala  
 165 170 175

Glu Glu Ser Met Asp Tyr Phe Lys Thr Glu Leu Leu Tyr Gln Thr Gly  
 180 185 190

Leu Ser Gln Glu Pro Gly Asn Val Leu Leu Leu Ala Asn Tyr Ala Gln  
 195 200 205

Phe Leu Tyr Leu Ile Ile His Asp Tyr Asp Arg Ala Glu Lys Tyr Phe  
 210 215 220

Lys Arg Ala Ala Lys Ala Glu Pro Ala Asp Ala Glu Ala Leu Asn Lys  
 225 230 235 240

Tyr Ala Thr Phe Leu Trp Arg Ala Arg Asn Asp Ile Trp Arg Ala Glu  
 245 250 255

Glu Thr Tyr Leu Glu Ala Ile Ser Ala Asp Pro Thr Asn Ser Val Tyr  
 260 265 270

Ser Ala Asn Tyr Ala His Phe Leu Trp Asn Thr Gly Gly Asp Glu Thr  
 275 280 285

Cys Phe Pro Leu Asp Ala Pro Ser Gln Gln Asn Asn Thr Thr  
 290 295 300

<210> 2083

<211> 753

<212> DNA

<213> Arabidopsis thaliana

<400> 2083  
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tcgaagaaga	agaaggacac	gaaggagaag	ggtttttggg	agtacgatta	cgagagcttc	240
gtggagggtg	caagagagat	gatgcaggga	cgggccagag	tgacgagca	agaggccgtg	300
agggagggtc	ttctctctat	gctgcctcct	gggtcctctg	aacagtttag	gaaattgttc	360
ccaccaacga	aatgggctgc	agagttcaat	gccgctctta	cagtgccttt	ctttcactgg	420
ttggttggtc	catctcaggt	catagaagtg	gaagtgaatg	gtgtgaaaca	gagaagtgga	480
gttcgtatca	agaaatgcag	gtatctggag	aacagtgggt	gtgtaggaat	gtgtgtgaat	540
atgtgcaaga	ttccaaccca	agatttcttc	accaatgagt	ttggcctccc	actcaccatg	600
aacccaatt	atgaagacat	gagctgcgag	atgatatacg	ggcaagcacc	tccggccttt	660
gaggaggatg	tagccaccaa	gcaaccttgt	ctagcagata	tatgttctat	gtcgaatcca	720
agctcccaa	tctgccctaa	actagaggca	tga			753

<210> 2084

<211> 250

<212> PRT

<213> Arabidopsis thaliana

<400> 2084

Met Ala Ala Ile Ala Ser Leu Gln Ala Val Asn Leu Thr Phe Arg Arg  
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Arg Ser Thr Arg Cys Gly Ile Ala Glu Pro Ser Gly Glu Pro Ala Pro  
20 25 30

Met Gly Leu Lys Thr Arg Tyr Glu Asp Gly Leu Val Glu Arg Val Phe  
35 40 45

Met Gly Leu Phe Ala Arg Lys Met Asp Lys Phe Gly Ser Lys Lys Lys  
50 55 60

Lys Asp Thr Lys Glu Lys Gly Phe Trp Glu Tyr Asp Tyr Glu Ser Phe  
65 70 75 80

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Gln Glu Ala Val Arg Glu Val Leu Leu Ser Met Leu Pro Pro Gly Ala  
3021

Pro Glu Gln Phe Arg Lys Leu Phe Pro Pro Thr Lys Trp Ala Ala Glu  
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Phe Asn Ala Ala Leu Thr Val Pro Phe Phe His Trp Leu Val Gly Pro  
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Ser Gln Val Ile Glu Val Glu Val Asn Gly Val Lys Gln Arg Ser Gly  
145 150 155 160

Val Arg Ile Lys Lys Cys Arg Tyr Leu Glu Asn Ser Gly Cys Val Gly  
165 170 175

Met Cys Val Asn Met Cys Lys Ile Pro Thr Gln Asp Phe Phe Thr Asn  
180 185 190

Glu Phe Gly Leu Pro Leu Thr Met Asn Pro Asn Tyr Glu Asp Met Ser  
195 200 205

Cys Glu Met Ile Tyr Gly Gln Ala Pro Pro Ala Phe Glu Glu Asp Val  
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<210> 2085

<211> 1563

<212> DNA

<213> Arabidopsis thaliana

<400> 2085

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<210> 2086

<211> 520

<212> PRT

<213> Arabidopsis thaliana

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Page 3023

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 Cys Leu Asp Pro Asp Ala Ser Ser Ser Val Leu Gly Ile Ile Leu Gly  
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 Gly Gly Ala Gly Thr Arg Leu Tyr Pro Leu Thr Lys Lys Arg Ala Lys  
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 Pro Ala Val Pro Leu Gly Ala Asn Tyr Arg Leu Ile Asp Ile Pro Val  
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 Ile Gln Ala His Arg Glu Thr Asp Ala Asp Ile Thr Val Ala Ala Leu  
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 Pro Met Asp Glu Gln Arg Ala Thr Ala Phe Gly Leu Met Lys Ile Asp  
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Arg Ala Lys Glu Met Pro Phe Ile Ala Ser Met Gly Ile Tyr Val Val  
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Asn Asp Phe Gly Ser Glu Val Ile Pro Gly Ala Thr Ser Leu Gly Leu  
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Pro Asp Phe Ser Phe Tyr Asp Arg Ser Ala Pro Ile Tyr Thr Gln Pro  
 370 375 380

Arg Tyr Leu Pro Pro Ser Lys Met Leu Asp Ala Asp Val Thr Asp Ser  
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Val Val Gly Leu Arg Ser Cys Ile Ser Glu Gly Ala Ile Ile Glu Asp  
 420 425 430

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Val Lys Ile Ile Asn Ser Asp Asn Val Gln Glu Ala Ala Arg Glu Thr  
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<210> 2087

<211> 1104

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2087

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&lt;210&gt; 2088

&lt;211&gt; 367

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2088

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Asp Asp Pro Lys Lys Ala Thr Pro Asn Glu Ile Ser Trp Ile Asn Val  
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Phe Ala Asn Ser Ile Pro Ser Phe Lys Lys Arg Ala Glu Ser Asp Ile  
50 55 60

Thr Val Pro Asp Ala Pro Ala Arg Ala Glu Lys Phe Ala Glu Arg Tyr  
65 70 75 80

Ala Gly Ile Leu Glu Asp Leu Lys Lys Asp Pro Glu Ser His Gly Gly  
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Pro Pro Asp Gly Ile Leu Leu Cys Arg Leu Arg Glu Gln Val Leu Arg  
100 105 110

Glu Leu Gly Phe Arg Asp Ile Phe Lys Lys Val Lys Asp Glu Glu Asn  
115 120 125

Ala Lys Ala Ile Ser Leu Phe Pro Gln Val Val Ser Leu Ser Asp Ala  
130 135 140

Ile Glu Asp Asp Gly Lys Arg Leu Glu Asn Leu Val Arg Gly Ile Phe  
145 150 155 160

Ala Gly Asn Ile Phe Asp Leu Gly Ser Ala Gln Leu Ala Glu Val Phe  
165 170 175

Ser Arg Asp Gly Met Ser Phe Leu Ala Ser Cys Gln Asn Leu Val Pro  
180 185 190

Arg Pro Trp Val Ile Asp Asp Leu Glu Asn Phe Gln Ala Lys Trp Ile  
195 200 205

Asn Lys Ser Trp Lys Lys Ala Val Ile Phe Val Asp Asn Ser Gly Ala  
210 215 220

Asp Ile Ile Leu Gly Ile Leu Pro Phe Ala Arg Glu Leu Leu Arg Arg  
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Gly Ala Gln Val Val Leu Ala Ala Asn Glu Leu Pro Ser Ile Asn Asp  
245 250 255

Ile Thr Cys Thr Glu Leu Thr Glu Ile Leu Ser Gln Leu Lys Asp Glu  
260 265 270

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Asn Gly Gln Leu Leu Gly Val Asp Thr Ser Lys Leu Leu Ile Ala Asn  
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Ser Gly Asn Asp Leu Pro Val Ile Asp Leu Ser Arg Val Ser Gln Glu  
290 295 300

Leu Ala Tyr Leu Ser Ser Asp Ala Asp Leu Val Ile Val Glu Gly Met  
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Gly Arg Gly Ile Glu Thr Asn Leu Tyr Ala Gln Phe Lys Cys Asp Ser  
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<211> 615

<212> DNA

<213> Arabidopsis thaliana

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<211> 204

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2090

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Leu Leu Gly Phe Ser Asp Gln Glu Ser Ser Asn Gly Asp Asp Asp Asp  
 35 40 45

Val Ala Ser Ser Arg Glu Arg Ile Ile Leu Val Asn Pro Phe Thr Gln  
 50 55 60

Gly Met Ile Val Leu Glu Gly Ser Ser Gly Met Asn Pro Leu Leu Arg  
 65 70 75 80

Ser Leu Leu Glu Ser Arg Glu Glu Gly Arg Pro Pro Ala Ser Lys Ala  
 85 90 95

Ser Ile Asp Ala Met Pro Ile Val Glu Ile Asp Gly Cys Glu Gly Glu  
 100 105 110

Cys Val Ile Cys Leu Glu Glu Trp Lys Ser Glu Glu Thr Val Lys Glu  
 115 120 125

Met Pro Cys Lys His Arg Phe His Gly Gly Cys Ile Glu Lys Trp Leu  
 130 135 140

Gly Phe His Gly Ser Cys Pro Val Cys Arg Tyr Glu Met Pro Val Asp  
 145 150 155 160

Gly Asp Glu Ile Gly Lys Lys Arg Asn Asp Gly Asn Glu Ile Trp Val  
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Arg Phe Ser Phe Asn Asp Gly Arg Arg Ile Arg Asp Phe Ser Ala Gln  
 180 185 190

Asp Gly Gly Asn Ser Asp Gly Val Glu Ser Glu Asn  
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&lt;210&gt; 2091

&lt;211&gt; 3396

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2091

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&lt;211&gt; 1131

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2092

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Gln Asp Ile Glu Asp Lys Leu Leu His Ala His Leu Arg Arg Gln Gln  
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Phe Tyr His Asn Val Ser Arg Lys Ala Arg Ala Lys Pro Arg Ser Pro  
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Ser Arg Ser Ser Asp Glu Glu Leu Gly Gln Arg Ile Glu Ala Arg Leu  
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Arg Leu Ala Lys Leu Asp Glu Leu Arg Gln Ala Ala Lys Thr Ser Val  
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 180 185 190

Ser Ile Asn Gln Lys Arg Val Ala Ala Glu Lys Lys Arg Leu Gly Leu  
 195 200 205

Leu Glu Ala Glu Lys Lys Lys Ala Arg Ala Arg Val Gln Gln Val Arg  
 210 215 220

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 260 265 270  
 Tyr Cys Asp Met Met Gln Glu Asp Ala Asp Leu Leu Ser Arg Lys Leu  
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 Ser Arg Cys Trp Arg Cys Phe Val Arg Gln Lys Arg Thr Thr Leu Asp  
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 Leu Ala Lys Ala Tyr Asp Gly Leu Lys Ile Asn Glu Ser Leu Pro Phe  
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 370 375 380  
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 385 390 395 400  
 Thr Ser Val Lys Met Ser Arg Tyr Pro Val Arg Val Val Leu Ser Ala  
 405 410 415  
 Phe Met Ile Leu Gly His Pro Asp Ala Val Phe Asn Gly Gln Gly Asp  
 420 425 430  
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 435 440 445  
 Lys Leu Leu Ile Asn Val Ile Gln Glu Gly Pro Val Gln Val Ser Gly  
 450 455 460  
 Gly Glu Ser Lys His Arg Thr Leu Arg Ser Gln Leu Asp Leu Phe Asp  
 Page 3033

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 Ser Ser Ser Arg Ser Lys Asp Ser Ile Gly Val Glu Gly Ser Asn Arg  
                                  610                      615                      620  
 Val Asn Arg Ser Leu Leu Lys Asp Asp Thr Pro Pro Ser Ser Gly Pro  
                                  625                      630                      635                      640  
 Ser Arg Val Ser Asn Gly Thr Val Asp Glu Val Ser Asn Gln Asn Glu  
                                  645                      650                      655  
 Leu Met Val Asn Glu Phe Leu His Asp Gly Asn Leu Asn Phe Pro Gly  
                                  660                      665                      670  
 Gly Ser Thr Val Lys Asp Glu Glu Asp Asn Leu Lys Arg Arg Ile Lys  
                                  675                      680                      685  
 Glu Thr Met Glu Arg Ala Phe Trp Asp Asn Val Met Glu Ser Met Lys  
                                  690                      695                      700  
 Leu Glu Lys Pro Asp Tyr Ser Cys Ile Ser Asn Leu Met Lys Glu Val  
                                  705                      710                      715                      720



Ser Asp Glu Leu Cys Gln Met Val Pro Asp Ser Trp Lys Val Glu Ile  
 725 730 735  
 Thr Glu Thr Ile Asp Leu Asp Ile Leu Ser Gln Leu Leu Asn Ser Gly  
 740 745 750  
 Thr Leu Asp Ile Asp Tyr Leu Gly Lys Met Leu Glu Phe Ala Leu Ala  
 755 760 765  
 Thr Leu Arg Lys Leu Ser Ala Pro Ala Asn Asp Arg Glu Asn Glu Ser  
 770 775 780  
 Thr His Arg Asp Leu Leu Lys Glu Leu His Arg Leu Cys Glu Ala Glu  
 785 790 795 800  
 Asp Glu Ser Gly Asn Phe Arg Ala Val Ala Ile Val Lys Gly Ile Arg  
 805 810 815  
 Phe Ile Leu Glu Gln Ile Gln Glu Leu Lys Arg Glu Ile Gly Ile Gly  
 820 825 830  
 Arg Ile Ala Ile Met Lys Pro Phe Leu Gln Gly Pro Ala Gly Phe Asp  
 835 840 845  
 Tyr Leu Thr Lys Ala Phe Glu Lys Arg Tyr Gly Pro Pro Thr Gln Ala  
 850 855 860  
 Tyr Glu Ser Leu Pro Val Thr Arg Arg Trp Ile Ser Thr Leu Leu Ser  
 865 870 875 880  
 Ser Lys Glu Glu Trp Glu Glu His Asn Asn Thr Leu Ser Ala Leu Asn  
 885 890 895  
 Val Val Glu Arg Ser Ser Met Gly Ile Ser Leu Lys Thr Gly Gly Ser  
 900 905 910  
 Phe Leu Ser Pro Val Asn Thr Thr Ser Lys Ser Thr Val Met Asp Thr  
 915 920 925  
 Ala Gly Gln Leu Ser Glu Cys Lys Gly Glu Arg Val Asp Leu Ala Val  
 930 935 940  
 Arg Leu Gly Leu Leu Lys Leu Val Asn Gln Val Ala Gly Leu Thr Pro  
 945 950 955 960  
 Glu Val Leu Pro Glu Thr Phe Gln Leu Asn Leu Phe Arg Val Arg Asp  
 965 970 975

047-E2F-PCT.ST25.txt

Ile Gln Ala Glu Ile Gln Asn Ile Ile Val Val Thr Thr Ser Leu Leu  
980 985 990

Ile Trp Arg Gln Met Leu Ala Lys Ser Glu Ser Glu Thr Glu Ser Met  
995 1000 1005

Ala Lys Lys Leu Leu Glu Leu Leu Asp Gly Lys Glu Gly Ala Gly  
1010 1015 1020

Leu Thr Glu Ile Ile Glu Thr Thr Met Ser Glu Glu Asp Gly Glu  
1025 1030 1035

Lys Lys Lys Met Met Arg Gly Leu Leu Gly Lys Ser Leu Gly Glu  
1040 1045 1050

Gly Asn Thr Val Tyr Glu Arg Val Thr Ser Cys Ile Tyr Lys Ala  
1055 1060 1065

Ala Arg Gly Ala Leu Leu Ala Gly Asn Gly Glu Asn Gly Lys Arg  
1070 1075 1080

Met Val Glu Thr Glu Met Lys Lys Val Gly Gly Gly Gly Gly Leu  
1085 1090 1095

Lys Glu Arg Val Leu Glu Thr Ala Arg Ala Leu Gly Val Val Ala  
1100 1105 1110

Cys Val Ser Val Arg Val His Gly Pro Trp Leu Thr Gln Leu Met  
1115 1120 1125

Pro Gln His  
1130

<210> 2093

<211> 768

<212> DNA

<213> Arabidopsis thaliana

<400> 2093  
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ttgatcgaag atgagatcga gaggagcaaa gtcgggatca tgagagctct ctgcgaccga 120  
caagatcctg aaactaagga ggtggatgat ctgatgataa ggaggtttct gagagcgcgt 180  
gacctggaca ttgaaaaggc ttcaacgatg tttctaaatt acctgacttg gaagagaagc 240

## 047-E2F-PCT.ST25.txt

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atgtcccaa aggggcacat accagaagca gagattgcaa atgatctatc gcataacaag 300
atgtgtatgc aagggtcatga caagatgggt cgacctatcg ctgttgccat tgggaacaga 360
cataaccctt ccaaaggcaa ccctgacgag ttcaagcgtt ttgttgtcta cagctcgag 420
aagatttgtg ctagaatgcc gagaggtcaa gagaaattcg tagcaattgg agatctgcaa 480
ggctggggat attctaattg tgacatccgt ggctaccttg ctgctctttc cactttgcag 540
gattgttacc cagagagatt agggaaactc tatatagttc atgcccccta cattttcatg 600
accgcatgga aggtcattta tccttttacc gacgccaaca ccaagaaaaa gattgttttc 660
gtggagaaca agaaactcac tccaacgctg cttgaagaca tagacgaaag ccaacttccc 720
gacatctacg gaggcaaatt gccacttgtt cctattcagg agacctga 768

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&lt;210&gt; 2094

&lt;211&gt; 255

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2094

```

Met Glu Asn Lys Glu Thr Lys Gln Glu Pro Ala Ala Ala Ala Glu Gln
1      5      10

```

```

Lys Thr Val Pro Leu Ile Glu Asp Glu Ile Glu Arg Ser Lys Val Gly
20      25      30

```

```

Ile Met Arg Ala Leu Cys Asp Arg Gln Asp Pro Glu Thr Lys Glu Val
35      40      45

```

```

Asp Asp Leu Met Ile Arg Arg Phe Leu Arg Ala Arg Asp Leu Asp Ile
50      55      60

```

```

Glu Lys Ala Ser Thr Met Phe Leu Asn Tyr Leu Thr Trp Lys Arg Ser
65      70      75      80

```

```

Met Leu Pro Lys Gly His Ile Pro Glu Ala Glu Ile Ala Asn Asp Leu
85      90      95

```

```

Ser His Asn Lys Met Cys Met Gln Gly His Asp Lys Met Gly Arg Pro
100     105     110

```

```

Ile Ala Val Ala Ile Gly Asn Arg His Asn Pro Ser Lys Gly Asn Pro
115     120

```

047-E2F-PCT.ST25.txt

Asp Glu Phe Lys Arg Phe Val Val Tyr Thr Leu Glu Lys Ile Cys Ala  
 130 135  
 Arg Met Pro Arg Gly Gln Glu Lys Phe Val Ala Ile Gly Asp Leu Gln  
 145 150 155  
 Gly Trp Gly Tyr Ser Asn Cys Asp Ile Arg Gly Tyr Leu Ala Leu  
 165 170 175  
 Ser Thr Leu Gln Asp Cys Tyr Pro Glu Arg Leu Gly Lys Leu Tyr Ile  
 180 185 190  
 Val His Ala Pro Tyr Ile Phe Met Thr Ala Trp Lys Val Ile Tyr Pro  
 195 200 205  
 Phe Ile Asp Ala Asn Thr Lys Lys Lys Ile Val Phe Val Glu Asn Lys  
 210 215 220  
 Lys Leu Thr Pro Thr Leu Leu Glu Asp Ile Asp Glu Ser Gln Leu Pro  
 225 230 235 240  
 Asp Ile Tyr Gly Gly Lys Leu Pro Leu Val Pro Ile Gln Glu Thr  
 245 250 255

<210> 2095

<211> 780

<212> DNA

<213> Arabidopsis thaliana

<400> 2095  
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 cagtctcaga atcttcgaca tcaagaagtt ggtcacaaga gtctcttaca gagcgatgat 120  
 ctctaccagt atatactgga gacaagtgtg taccctagag aaccagaatc aatgaaggaa 180  
 ctcagggaag tgacagcaaa acatccatgg aacataatga ccacatcagc tgatgaaggaa 240  
 cagttcttaa acatgcttat caagctcggtt aacgccaaga acacaatgga gatcgaggtt 300  
 tacactggct actctcttct cgccaccgct cttgctctcc ctgaagacgg caaaattctg 360  
 gctatggatg tcaacagaga gaattacgaa ttgggtttac cgatcattga gaaagccggc 420  
 gttgctcaca agatcgactt caggaaggc cctgctcttc ccgttcttga tgaatcggtt 480  
 gctgacgaga agaaccatgg aacatatgac ttatatattc ttgatgctga caaagacaac 540  
 tacatcaact accacaagcg ttgatcgat cttgtgaaaa ttggaggagt gattggctac 600

## 047-E2F-PCT.ST25.txt

gacaacactc tgtggaatgg ttctgtcgtg gctcctcctg atgcaccaat gaggaagtac	660
gttcgttact acagagactt tgttcttgag cttacaagg ctcttgctgc tgaccctcgg	720
atcgagatct gtagctccc tgttggtgat ggaatcacta tctgccgtcg gatcagttga	780

&lt;210&gt; 2096

&lt;211&gt; 259

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2096

Met Ala Thr Thr Thr Thr Glu Ala Thr Lys Thr Ser Ser Thr Asn Gly	
1 5 10 15	

Glu Asp Gln Lys Gln Ser Gln Asn Leu Arg His Gln Glu Val Gly His	
20 25 30	

Lys Ser Leu Leu Gln Ser Asp Asp Leu Tyr Gln Tyr Ile Leu Glu Thr	
35 40 45	

Ser Val Tyr Pro Arg Glu Pro Glu Ser Met Lys Glu Leu Arg Glu Val	
50 55 60	

Thr Ala Lys His Pro Trp Asn Ile Met Thr Thr Ser Ala Asp Glu Gly	
65 70 75 80	

Gln Phe Leu Asn Met Leu Ile Lys Leu Val Asn Ala Lys Asn Thr Met	
85 90 95	

Glu Ile Gly Val Tyr Thr Gly Tyr Ser Leu Leu Ala Thr Ala Leu Ala	
100 105 110	

Leu Pro Glu Asp Gly Lys Ile Leu Ala Met Asp Val Asn Arg Glu Asn	
115 120 125	

Tyr Glu Leu Gly Leu Pro Ile Ile Glu Lys Ala Gly Val Ala His Lys	
130 135 140	

Ile Asp Phe Arg Glu Gly Pro Ala Leu Pro Val Leu Asp Glu Ile Val	
145 150 155 160	

Ala Asp Glu Lys Asn His Gly Thr Tyr Asp Phe Ile Phe Val Asp Ala	
165 170 175	

047-E2F-PCT.ST25.txt

Asp Lys Asp Asn Tyr Ile Asn Tyr His Lys Arg Leu Ile Asp Leu Val  
180 185 190

Lys Ile Gly Gly Val Ile Gly Tyr Asp Asn Thr Leu Trp Asn Gly Ser  
195 200 205

Val Val Ala Pro Pro Asp Ala Pro Met Arg Lys Tyr Val Arg Tyr Tyr  
210 215 220

Arg Asp Phe Val Leu Glu Leu Asn Lys Ala Leu Ala Ala Asp Pro Arg  
225 230 235 240

Ile Glu Ile Cys Met Leu Pro Val Gly Asp Gly Ile Thr Ile Cys Arg  
245 250 255

Arg Ile Ser

<210> 2097

<211> 1764

<212> DNA

<213> Arabidopsis thaliana

<400> 2097  
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acgtcactcc cggaactaca gaagaaaact aaaacgaagc tgattctctt cactttggcc 120  
gttttggtag ttggagtagt ctgcttcggt atctttgccg gcatccgagc cgtagactcg 180  
ggtaaaaccg agccgaaact aacccgtaaa ccgacccaag caatctcccg aacctgtagc 240  
aaatccttat acccgaaact atgcatcgac acacttcttg actttccggg atctttaacc 300  
gccgacgaga acgagctcat tcacatatca ttcaacgcaa cgcttcaaaa attcagcaaa 360  
gctctttata ctctctcgac gatcacatag actcagatgc ccccacgtgt acggtcagct 420  
tacgattctt gccttgagtt acttgatgat tcagtggacg cgctcacacg cgctctttcc 480  
tccgtcgttg tcgtctccgg agatgagtct cattccgatg tgatgacgtg gcttagctct 540  
gcgatgacta accacgacac ttgactgac ggattcgatg aaattgaagg tcaaggagga 600  
gaagtgaagg atcaagtgat cggagcgggt aaagatttgt cggagatggt gagtaattgt 660  
ttggctatat tcgccggaaa agttaaggat ttatctggag ttccggtggt gaataatagg 720  
aagttacttg ggactgaaga aacagaggaa ttacctaatt ggttgaagag agaagacaga 780  
gagcttcttg gtactccaac gtcggcgatt caagctgata tcacggtgtc gaaagacggt 840

047-E2F-PCT.ST25.txt

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agcggaaactg ttaagacgat cgcggaggcg atcaagaaaag ccccgagga tagtagccga 900
cgattcgta tctacgttaa agcaggaaga tacgaagaag agaactctgaa agttggtagg 960
aagaagacaa acttgatgtt catcggggac ggcaagggtta aaacgggtcat aaccgggtggg 1020
aaaagtatcg ccgatgatct aactactttt cacaccgcca ctttcgctgc gactgggtgct 1080
ggatttatag tgagggacat gacgtttgag aattacgccg gaccgggta gcatcagacc 1140
gtggcactcc gtgttggtgg agaccacgcg gtgggtttacc gttgcaacat tatcggttac 1200
caagacgcgc tttacgtaca ttctaaccga cagtttttcc gcgaatgcga aatttatgga 1260
acggtcgatt ttatattcgg gaatgcggct gtgatcttac agagtgttaa catttatcgcg 1320
cgtaaaccaa tggctcagca gaagattact attacggctc agaaccgaaa agatccgaat 1380
cagaatacgg ggatttcgat tcatgcttgt aagctactag caacaccgga tcttgaagcc 1440
tctaagggta gttatccgac gtatctcggc cgtccgtgga agttgtattc tagagttgtg 1500
tacatgatgt cggatatggg tgaccatatt gaccgcgag gatggttgga gtggaatggt 1560
ccgtttgcat tggactcgtt gtactatggt gagtatatga acaaagggtt ggggttcagga 1620
attggtcaac gagtcaaag gcttggttat catgttatta cctcaacggt agaggctagt 1680
aagtttacgg tggctcagtt catttctggt tcttcgtggt tgccatccac cgggtgtgtcc 1740
ttcttctccg ggtgtgcaca atag 1764

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<210> 2098

<211> 587

<212> PRT

<213> Arabidopsis thaliana

<400> 2098

Met Gly Tyr Asp Arg Leu Gly Pro Ser Gly Pro Ser Asn Pro Asn Gln  
1 5 10 15

Lys Asp Pro Ala Thr Ser Leu Pro Glu Leu Gln Lys Lys Thr Lys Thr  
20 25 30

Lys Leu Ile Leu Phe Thr Leu Ala Val Leu Val Val Gly Val Val Cys  
35 40 45

Phe Gly Ile Phe Ala Gly Ile Arg Ala Val Asp Ser Gly Lys Thr Glu  
50 55 60

Pro Lys Leu Thr Arg Lys Pro Thr Gln Ala Ile Ser Arg Thr Cys Ser  
Page 3041

65                      70                      75                      80  
 Lys Ser Leu Tyr Pro Asn Leu Cys Ile Asp Thr Leu Leu Asp Phe Pro  
                                  85                                   90                                   95  
 Gly Ser Leu Thr Ala Asp Glu Asn Glu Leu Ile His Ile Ser Phe Asn  
                                  100                                   105                                   110  
 Ala Thr Leu Gln Lys Phe Ser Lys Ala Leu Tyr Thr Ser Ser Thr Ile  
                                  115                                   120                                   125  
 Thr Tyr Thr Gln Met Pro Pro Arg Val Arg Ser Ala Tyr Asp Ser Cys  
                                  130                                   135                                   140  
 Leu Glu Leu Leu Asp Asp Ser Val Asp Ala Leu Thr Arg Ala Leu Ser  
                                  145                                   150                                   155                                   160  
 Ser Val Val Val Val Ser Gly Asp Glu Ser His Ser Asp Val Met Thr  
                                  165                                   170                                   175  
 Trp Leu Ser Ser Ala Met Thr Asn His Asp Thr Cys Thr Asp Gly Phe  
                                  180                                   185                                   190  
 Asp Glu Ile Glu Gly Gln Gly Gly Glu Val Lys Asp Gln Val Ile Gly  
                                  195                                   200                                   205  
 Ala Val Lys Asp Leu Ser Glu Met Val Ser Asn Cys Leu Ala Ile Phe  
                                  210                                   215                                   220  
 Ala Gly Lys Val Lys Asp Leu Ser Gly Val Pro Val Val Asn Asn Arg  
                                  225                                   230                                   235                                   240  
 Lys Leu Leu Gly Thr Glu Glu Thr Glu Glu Leu Pro Asn Trp Leu Lys  
                                  245                                   250                                   255  
 Arg Glu Asp Arg Glu Leu Leu Gly Thr Pro Thr Ser Ala Ile Gln Ala  
                                  260                                   265                                   270  
 Asp Ile Thr Val Ser Lys Asp Gly Ser Gly Thr Phe Lys Thr Ile Ala  
                                  275                                   280                                   285  
 Glu Ala Ile Lys Lys Ala Pro Glu His Ser Ser Arg Arg Phe Val Ile  
                                  290                                   295                                   300  
 Tyr Val Lys Ala Gly Arg Tyr Glu Glu Glu Asn Leu Lys Val Gly Arg  
                                  305                                   310                                   315                                   320



047-E2F-PCT.ST25.txt

Lys Lys Thr Asn Leu Met Phe Ile Gly Asp Gly Lys Gly Lys Thr Val  
 325 330  
 Ile Thr Gly Gly Lys Ser Ile Ala Asp Asp Leu Thr Thr Phe His Thr  
 340 345 350  
 Ala Thr Phe Ala Ala Thr Gly Ala Gly Phe Ile Val Arg Asp Met Thr  
 355 360 365  
 Phe Glu Asn Tyr Ala Gly Pro Ala Lys His Gln Ala Val Ala Leu Arg  
 370 375 380  
 Val Gly Gly Asp His Ala Val Val Tyr Arg Cys Asn Ile Ile Gly Tyr  
 385 390 395 400  
 Gln Asp Ala Leu Tyr Val His Ser Asn Arg Gln Phe Phe Arg Glu Cys  
 405 410 415  
 Glu Ile Tyr Gly Thr Val Asp Phe Ile Phe Gly Asn Ala Ala Val Ile  
 420 425 430  
 Leu Gln Ser Cys Asn Ile Tyr Ala Arg Lys Pro Met Ala Gln Gln Lys  
 435 440 445  
 Ile Thr Ile Thr Ala Gln Asn Arg Lys Asp Pro Asn Gln Asn Thr Gly  
 450 455 460  
 Ile Ser Ile His Ala Cys Lys Leu Leu Ala Thr Pro Asp Leu Glu Ala  
 465 470 475 480  
 Ser Lys Gly Ser Tyr Pro Thr Tyr Leu Gly Arg Pro Trp Lys Leu Tyr  
 485 490 495  
 Ser Arg Val Val Tyr Met Met Ser Asp Met Gly Asp His Ile Asp Pro  
 500 505 510  
 Arg Gly Trp Leu Glu Trp Asn Gly Pro Phe Ala Leu Asp Ser Leu Tyr  
 515 520 525  
 Tyr Gly Glu Tyr Met Asn Lys Gly Leu Gly Ser Gly Ile Gly Gln Arg  
 530 535 540  
 Val Lys Trp Pro Gly Tyr His Val Ile Thr Ser Thr Val Glu Ala Ser  
 545 550 555 560  
 Lys Phe Thr Val Ala Gln Phe Ile Ser Gly Ser Ser Trp Leu Pro Ser  
 565 570 575

047-E2F-PCT.ST25.txt

Thr Gly Val Ser Phe Phe Ser Gly Leu Ser Gln  
580 585

<210> 2099

<211> 537

<212> DNA

<213> Arabidopsis thaliana

<400> 2099  
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ggatatggcc agatccataa ccgtgagggg tataaccaa accgtgaggg ataatagccaa 180  
agccagagtc gcccagtata tgggcttagc ccgactttga accaccgtag ccacgggtggg 240  
tttcttgatg ggctcttcaa ggggtcaaat ggccaaaagg gtcagagtgg gctagggcacg 300  
tttctagggc aacacaagag ccaagaggct aaaaagagtc aaggacatgg gaagctcttg 360  
gggcaacatg accagaagaa aatcatgag acaaacagtg gtcttaatgg ccttggaatg 420  
ttcatataca atgggtgagaa gaaacatagg aggaaaagtg agcacaagaa gaagaacaag 480  
gatgggcatg gcagtggttaa tgagagtgga agcagcagcg gtacgcagag cgactga 537

<210> 2100

<211> 178

<212> PRT

<213> Arabidopsis thaliana

<400> 2100

Met Gln Tyr Tyr Glu Asn Arg Glu Lys Asp Tyr Tyr Glu Val Ala Gln  
1 5 10 15  
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20 25 30  
Tyr Gly Gln Ser Gln Ser Arg Gly Gly Tyr Gly Gln Ile His Asn Arg  
35 40 45  
Glu Gly Tyr Asn Gln Asn Arg Glu Gly Tyr Ser Gln Ser Gln Ser Arg  
50 55 60

047-E2F-PCT.ST25.txt

Pro Val Tyr Gly Leu Ser Pro Thr Leu Asn His Arg Ser His Gly Gly  
65 70 75 80

Phe Leu Asp Gly Leu Phe Lys Gly Gln Asn Gly Gln Lys Gly Gln Ser  
85 90 95

Gly Leu Gly Thr Phe Leu Gly Gln His Lys Ser Gln Glu Ala Lys Lys  
100 105 110

Ser Gln Gly His Gly Lys Leu Leu Gly Gln His Asp Gln Lys Lys Thr  
115 120 125

His Glu Thr Asn Ser Gly Leu Asn Gly Leu Gly Met Phe Ile Asn Asn  
130 135 140

Gly Glu Lys Lys His Arg Arg Lys Ser Glu His Lys Lys Lys Asn Lys  
145 150 155 160

Asp Gly His Gly Ser Gly Asn Glu Ser Gly Ser Ser Ser Gly Ser Asp  
165 170 175

Ser Asp

<210> 2101

<211> 1089

<212> DNA

<213> Arabidopsis thaliana

<400> 2101  
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aactcaaagc ctatcttctg tctgaaaacc ctctccggtt atcgttcttc ttctttctgt 120  
ggcggctgta ttcgtaaaat caaccataag cctcttcgaa tgacgagttc caatattaca 180  
ccaagagcta tggccacaca acagcttgag aacgctgac agtcattga ttctgtcgaa 240  
acttttatct tcgattgtga tgggtgtgatt tggaaaggag ataaattgat agaggagatt 300  
cctgaaactc ttgatatgct tcgtgccaag ggaagagat tggtttttgt gacaacaac 360  
tcaacaaaat ctaggaaaca gtatggaaaa aagttcgaga ctcttggcct gaatgttaac 420  
gaggaggaga tattgtcttc atcttttgct gctgctgcat acttcgagtc tattaatttc 480  
ccaaaagata agaaggtcta tgtgattggt gaggaaggta tcttgaaaga gctagagctt 540  
gctggttttc aataccttgg aggtccggat gatggtaaaa gacagattga attgaagcca 600

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ttcatcgcta caaaccgaga tgctgtcact cactttactg atgctcaaga atgggcaggt 780
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aagactctac tcgtctcttc ggggtgttact tcaatctcta tgttggaaag ccctgagaac 1020
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actgtataa

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&lt;210&gt; 2102

&lt;211&gt; 362

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2102

```

Met Leu Ser Arg Ser Val Ala Ser Ala val Thr Pro Val Ser Ser Ser
1          5          10          15

```

```

Ser Leu Leu Pro Asn Ser Lys Pro Ile Phe Cys Leu Lys Thr Leu Ser
20          25          30

```

```

Gly Tyr Arg Ser Ser Ser Phe Cys Gly Gly Cys Ile Arg Lys Ile Asn
35          40          45

```

```

His Lys Pro Leu Arg Met Thr Ser Ser Asn Ile Thr Pro Arg Ala Met
50          55          60

```

```

Ala Thr Gln Gln Leu Glu Asn Ala Asp Gln Leu Ile Asp Ser Val Glu
65          70          75          80

```

```

Thr Phe Ile Phe Asp Cys Asp Gly Val Ile Trp Lys Gly Asp Lys Leu
85          90          95

```

```

Ile Glu Gly Val Pro Glu Thr Leu Asp Met Leu Arg Ala Lys Gly Lys
100          105          110

```

```

Arg Leu Val Phe Val Thr Asn Asn Ser Thr Lys Ser Arg Lys Gln Tyr
115          120          125

```

047-E2F-PCT.ST25.txt

Gly Lys Lys Phe Glu Thr Leu Gly Leu Asn Val Asn Glu Glu Glu Ile  
130 135 140

Phe Ala Ser Ser Phe Ala Ala Ala Tyr Leu Gln Ser Ile Asn Phe  
145 150 155 160

Pro Lys Asp Lys Lys Val Tyr Val Ile Gly Glu Glu Gly Ile Leu Lys  
165 170 175

Glu Leu Glu Leu Ala Gly Phe Gln Tyr Leu Gly Gly Pro Asp Asp Gly  
180 185 190

Lys Arg Gln Ile Glu Leu Lys Pro Gly Phe Leu Met Glu His Asp His  
195 200 205

Asp Val Gly Ala Val Val Val Gly Phe Asp Arg Tyr Phe Asn Tyr Tyr  
210 215 220

Lys Ile Gln Tyr Gly Thr Leu Cys Ile Arg Glu Asn Pro Gly Cys Leu  
225 230 235 240

Phe Ile Ala Thr Asn Arg Asp Ala Val Thr His Leu Thr Asp Ala Gln  
245 250 255

Glu Trp Ala Gly Gly Gly Ser Met Val Gly Ala Leu Val Gly Ser Thr  
260 265 270

Gln Arg Glu Pro Leu Val Val Gly Lys Pro Ser Thr Phe Met Met Asp  
275 280 285

Tyr Leu Ala Asp Lys Phe Gly Ile Gln Lys Ser Gln Ile Cys Met Val  
290 295 300

Gly Asp Arg Leu Asp Thr Asp Ile Leu Phe Gly Gln Asn Gly Gly Cys  
305 310 315 320

Lys Thr Leu Leu Val Leu Ser Gly Val Thr Ser Ile Ser Met Leu Glu  
325 330 335

Ser Pro Glu Asn Lys Ile Gln Pro Asp Phe Tyr Thr Ser Lys Ile Ser  
340 345 350

Asp Phe Leu Ser Pro Lys Ala Ala Thr Val  
355 360

<210> 2103

<211> 1947

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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<400> 2103
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tcatcgccac cgcgtaaac ttccggcgat ggatcatcaa gcaaaacatc tttatcaacc      180
gttgattccc aagcccgtct cgctatgtac atagcaatgg ctcacgctgg tctcgttttc      240
gccatttgtg ttctgtattt cgtcggaaag ctattacaag agtatctaag accgattcaa      300
tgggcgattc tctgttcgat tcctttacga ggtattcaag aaaccttgtg tgatttctgg      360
agcgagcctt tgaattagg gcttacggaa gttgttctcg ctgttctctg ttctgtcttc      420
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acttggtctat tgtttagact atacaatata catttccttt acatgtcaac cgttcttgcc     1620
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047-E2F-PCT.ST25.txt

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<210> 2104

<211> 648

<212> PRT

<213> Arabidopsis thaliana

<400> 2104

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 20 25 30

Gln Asp Pro Pro Ser Ser Ser Ser Ser Pro Pro Arg Lys Pro Ser  
 35 40 45

Gly Asp Gly Ser Ser Ser Lys Thr Ser Leu Ser Thr Val Asp Ser Gln  
 50 55 60

Ala Arg Leu Ala Met Tyr Ile Ala Met Ala His Ala Gly Leu Ala Phe  
 65 70 75 80

Ala Ile Cys Val Leu Tyr Phe Val Gly Lys Leu Leu Gln Glu Tyr Leu  
 85 90 95

Arg Pro Ile Gln Trp Ala Ile Leu Cys Ser Ile Pro Leu Arg Gly Ile  
 100 105 110

Gln Glu Thr Leu Val Asp Phe Trp Ser Glu Pro Leu Lys Leu Gly Leu  
 115 120 125

Thr Glu Val Val Leu Ala Val Pro Val Ser Val Phe Asn Val Phe Ile  
 130 135 140

Gly Ser Ile Val Asp Ile Lys Asn Val Cys Phe Arg Val Phe Leu Arg  
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047-E2F-PCT.ST25.txt

Arg Ser Lys Pro Lys Arg Thr Arg Lys Lys Asn Asp Thr Gly Phe Ser  
165 170 175

Lys Leu Val Lys Trp Leu Val Ser Phe Gly Val Phe Val Ile Ala Tyr  
180 185 190

Glu Arg Ile Gly Gly Ile Gly Ser Leu Val Ile Leu Ser Leu Gly Phe  
195 200 205

Leu Phe Ser Ser Lys Asn Val Asp Ser Ser Leu Ser Ala Val Ser Ser  
210 215 220

Leu Arg Ser Asn Ser Phe Arg Arg Ser His Phe Thr Ala Tyr Phe Thr  
225 230 235 240

Arg Gly Ile Met Thr Arg Leu Asn Thr Ile Val Ala Ile Gly Leu Ile  
245 250 255

Val Leu Met Ile Val Gly Ser Leu Thr Gly Val Ile Phe Phe Ser Tyr  
260 265 270

Lys Ile Gly Val Glu Gly Lys Asp Ala Val Tyr Ser Leu Lys Ser His  
275 280 285

Val Glu Glu Ser Asn Tyr Ala Glu Lys Ile Gly Ile Lys Gln Trp Met  
290 295 300

Asp Glu Asn Asp Val Pro Gly Met Val Asp Met Tyr Thr Thr Lys Phe  
305 310 315 320

Tyr Glu Thr Val Ser Glu Gln Ile Asp Ser Leu Ala Met Gln Tyr Asn  
325 330 335

Met Thr Glu Leu Val Thr Gly Ile Lys His Phe Val Ile Gly His Pro  
340 345 350

Gln Asn Thr Ser Thr Pro Ser Thr Ala Leu Ile Thr Pro Ser Pro Tyr  
355 360 365

Thr Glu Lys Leu Met Ser Leu Arg Thr Arg Val Lys Asn Arg Glu Trp  
370 375 380

Ser Gln Ile Tyr Ser Glu Val Asp Val Ile Phe Arg Glu Leu Ile Ile  
385 390 395 400

Thr Arg Glu Asp Leu Val Glu Lys Ala Lys Gly Phe Ala Val Lys Gly  
405 410 415



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Met Asp Val Ser Gln Arg Val Phe Ser Ser Ser Ala Ser Val Val Gly  
420 425 430

Gly Gly Ala Lys Phe Val Phe Ser Ile Gly Asn Leu Ile Ile Ser Gly  
435 440 445

Ala Ala Glu Phe Phe Asn Phe Ile Ser Gln Leu Met Ile Phe Ile Trp  
450 455 460

Val Leu Tyr Ile Leu Ile Thr Ser Glu Ser Gly Gly Val Thr Glu Gln  
465 470 475 480

Val Met Asn Met Leu Pro Ile Asn Ala Ser Ala Arg Asn Arg Cys Val  
485 490 495

Glu Val Leu Asp Leu Ala Ile Ser Gly Val Leu Leu Ala Thr Ala Glu  
500 505 510

Ile Ala Phe Phe Gln Gly Cys Leu Thr Trp Leu Leu Phe Arg Leu Tyr  
515 520 525

Asn Ile His Phe Leu Tyr Met Ser Thr Val Leu Ala Phe Ile Ser Ala  
530 535 540

Leu Leu Pro Ile Phe Pro Tyr Trp Phe Ala Thr Ile Pro Ala Ala Leu  
545 550 555 560

Gln Leu Val Leu Glu Gly Arg Tyr Ile Val Ala Val Ile Leu Ser Val  
565 570 575

Thr His Leu Val Leu Met Glu Tyr Gly Ala Ser Glu Ile Gln Asp Asp  
580 585 590

Ile Pro Gly Ser Asn Ala Tyr Leu Thr Gly Leu Ser Ile Ile Gly Gly  
595 600 605

Val Thr Leu Phe Pro Ser Ala Leu Glu Gly Ala Ile Met Gly Pro Leu  
610 615 620

Ile Thr Thr Val Val Ile Ala Leu Lys Asp Leu Tyr Ala Glu Phe Val  
625 630 635 640

Leu Asn Glu Pro Lys Lys Ile Asn  
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<210> 2105

047-E2F-PCT.ST25.txt

<211> 1338

<212> DNA

<213> *Arabidopsis thaliana*

<400> 2105

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aaagtcatca acaaggatca agtaatgaag agacctggaa tgatggaaca aatcaaacgc	180
gagatttcaa tcatgaagct cgttcgtcat cccaacatag ttgaattgaa agaagtcag	240
gctacgaaga ccaagatctt cttcgtcatg gagttcggtt aaggcgcgga gcttttctgc	300
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tcagccgttg attattgcca tagtagaggc gtttctcatc gcgatctgaa acctgagaat	420
cttcttttag atgagaatgg agatttgaaa atctccgatt tcggattatc tgcgttaccg	480
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<210> 2106

<211> 445

<212> PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2106

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 20 25 30  
 Ile Gly Gly Glu Cys Val Ala Ile Lys Val Ile Asn Lys Asp Gln Val  
 35 40 45  
 Met Lys Arg Pro Gly Met Met Glu Gln Ile Lys Arg Glu Ile Ser Ile  
 50 55 60  
 Met Lys Leu Val Arg His Pro Asn Ile Val Glu Leu Lys Glu Val Met  
 65 70 75 80  
 Ala Thr Lys Thr Lys Ile Phe Phe Val Met Glu Phe Val Lys Gly Gly  
 85 90 95  
 Glu Leu Phe Cys Lys Ile Ser Lys Gly Lys Leu His Glu Asp Ala Ala  
 100 105 110  
 Arg Arg Tyr Phe Gln Gln Leu Ile Ser Ala Val Asp Tyr Cys His Ser  
 115 120 125  
 Arg Gly Val Ser His Arg Asp Leu Lys Pro Glu Asn Leu Leu Leu Asp  
 130 135 140  
 Glu Asn Gly Asp Leu Lys Ile Ser Asp Phe Gly Leu Ser Ala Leu Pro  
 145 150 155 160  
 Glu Gln Ile Leu Gln Asp Gly Leu Leu His Thr Gln Cys Gly Thr Pro  
 165 170 175  
 Ala Tyr Val Ala Pro Glu Val Leu Lys Lys Lys Gly Tyr Asp Gly Ala  
 180 185 190  
 Lys Ala Asp Ile Trp Ser Cys Gly Val Val Leu Tyr Val Leu Leu Ala  
 195 200 205  
 Gly Cys Leu Pro Phe Gln Asp Glu Asn Leu Met Asn Met Tyr Arg Lys  
 210 215 220  
 Ile Phe Arg Ala Asp Phe Glu Phe Pro Pro Trp Phe Ser Pro Glu Ala  
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225 230 240

Arg Arg Leu Ile Ser Lys Leu Leu Val Val Asp Pro Asp Arg Arg Ile  
245 250 255

Ser Ile Pro Ala Ile Met Arg Thr Pro Trp Leu Arg Lys Asn Phe Thr  
260 265 270

Pro Pro Leu Ala Phe Lys Ile Asp Glu Pro Ile Cys Ser Gln Ser Ser  
275 280 285

Lys Asn Asn Glu Glu Glu Glu Asp Gly Asp Cys Glu Asn Gln Thr  
290 295 300

Glu Pro Ile Ser Pro Lys Phe Phe Asn Ala Phe Glu Phe Ile Ser Ser  
305 310 315 320

Met Ser Ser Gly Phe Asp Leu Ser Ser Leu Phe Glu Ser Lys Arg Lys  
325 330 335

Val Gln Ser Val Phe Thr Ser Arg Ser Ser Ala Thr Glu Val Met Glu  
340 345 350

Lys Ile Glu Thr Val Thr Lys Glu Met Asn Met Lys Val Lys Arg Thr  
355 360 365

Lys Asp Phe Lys Val Lys Met Glu Gly Lys Thr Glu Gly Arg Lys Gly  
370 375 380

Arg Leu Ser Met Thr Ala Glu Val Phe Glu Val Ala Pro Glu Ile Ser  
385 390 395 400

Val Val Glu Phe Cys Lys Ser Ala Gly Asp Thr Leu Glu Tyr Asp Arg  
405 410 415

Leu Tyr Glu Glu Glu Val Arg Pro Ala Leu Asn Asp Ile Val Trp Ser  
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435 440 445

<210> 2107

<211> 1473

<212> DNA

<213> Arabidopsis thaliana

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<400> 2107
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gaagaaaccg cggcagagca tcatccaccg acagtgcagg aacagaaac tgcatcgacg 240
gagaaacaag aggttaaaga cgaagcatcg cagaaagaag tagctgaaga gaaaagaggt 300
atgattccac agaattcttg ttcatcaaa gaagaaagca gcaaaacttc tgatctatct 360
aattccgaga agaatactct cgatgaacta aaacatctag ttcgagaagc tctagacaat 420
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<210> 2108

<211> 490

<212> PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2108

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 20 25 30  
 Ala Leu Pro Thr Glu Thr Glu Thr Leu Glu Lys Val Thr Glu Thr Asn  
 35 40 45  
 Pro Pro Glu Thr Ala Asp Thr Thr Thr Lys Pro Glu Glu Thr Ala  
 50 55 60  
 Ala Glu His His Pro Pro Thr Val Thr Glu Thr Glu Thr Ala Ser Thr  
 65 70 75 80  
 Glu Lys Gln Glu Val Lys Asp Glu Ala Ser Gln Lys Glu Val Ala Glu  
 85 90 95  
 Glu Lys Lys Ser Met Ile Pro Gln Asn Leu Gly Ser Phe Lys Glu Glu  
 100 105 110  
 Ser Ser Lys Leu Ser Asp Leu Ser Asn Ser Glu Lys Lys Ser Leu Asp  
 115 120 125  
 Glu Leu Lys His Leu Val Arg Glu Ala Leu Asp Asn His Gln Phe Thr  
 130 135 140  
 Asn Thr Pro Glu Glu Val Lys Ile Trp Gly Ile Pro Leu Leu Glu Asp  
 145 150 155 160  
 Asp Arg Ser Asp Val Val Leu Leu Lys Phe Leu Arg Ala Arg Glu Phe  
 165 170 175  
 Lys Val Lys Asp Ser Phe Ala Met Leu Lys Asn Thr Ile Lys Trp Arg  
 180 185 190  
 Lys Glu Phe Lys Ile Asp Glu Leu Val Glu Glu Asp Leu Val Asp Asp  
 195 200 205  
 Leu Asp Lys Val Val Phe Met His Gly His Asp Arg Glu Gly His Pro  
 210 215 220  
 Val Cys Tyr Asn Val Tyr Gly Glu Phe Gln Asn Lys Glu Leu Tyr Asn  
 225 230 235 240

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Lys Thr Phe Ser Asp Glu Glu Lys Arg Lys His Phe Leu Arg Thr Arg  
 245 250 255  
 Ile Gln Phe Leu Glu Arg Ser Ile Arg Lys Leu Asp Phe Ser Ser Gly  
 260 265 270  
 Gly Val Ser Thr Ile Phe Gln Val Asn Asp Met Lys Asn Ser Pro Gly  
 275 280 285  
 Leu Gly Lys Lys Glu Leu Arg Ser Ala Thr Lys Gln Ala Val Glu Leu  
 290 295 300  
 Leu Gln Asp Asn Tyr Pro Glu Phe Val Phe Lys Gln Ala Phe Ile Asn  
 305 310 315 320  
 Val Pro Trp Trp Tyr Leu Val Phe Tyr Thr Val Ile Gly Pro Phe Met  
 325 330 335  
 Thr Pro Arg Ser Lys Ser Lys Leu Val Phe Ala Gly Pro Ser Arg Ser  
 340 345 350  
 Ala Glu Thr Leu Phe Lys Tyr Ile Ser Pro Glu Gln Val Pro Val Gln  
 355 360 365  
 Tyr Gly Gly Leu Ser Val Asp Pro Cys Asp Cys Asn Pro Asp Phe Ser  
 370 375 380  
 Leu Glu Asp Ser Ala Ser Glu Ile Thr Val Lys Pro Gly Thr Lys Gln  
 385 390 395 400  
 Thr Val Glu Ile Ile Ile Tyr Glu Lys Cys Glu Leu Val Trp Glu Ile  
 405 410 415  
 Arg Val Thr Gly Trp Glu Val Ser Tyr Lys Ala Glu Phe Val Pro Glu  
 420 425 430  
 Glu Lys Asp Ala Tyr Thr Val Val Ile Gln Lys Pro Arg Lys Met Arg  
 435 440 445  
 Pro Ser Asp Glu Pro Val Leu Thr His Ser Phe Lys Val Asn Glu Leu  
 450 455 460  
 Gly Lys Val Leu Leu Thr Val Asp Asn Pro Thr Ser Lys Lys Lys Lys  
 465 470 475 480  
 Leu Val Tyr Arg Phe Asn Val Lys Pro Leu  
 485 490

&lt;210&gt; 2109

&lt;211&gt; 501

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2109

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ccaatcgtga ctctcaaggt ctttgaagac aatgtcctcg tcagaaacca actagaaacg      180
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aagaccgaac tctctgtttg a                                     501

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&lt;210&gt; 2110

&lt;211&gt; 166

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2110

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Met Ala Ala Phe  Ala Thr Ala Glu Ala  Cys Asp Ser Asn Ala  Glu Leu
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Ile Ser Asn Gly Asp Leu Arg Ala  Leu His Pro Ile Phe Lys Ile Tyr
          20          25          30

Gly Gln Arg Arg Cys Phe Ser  Gly Pro Ile Val Thr  Leu Lys Val Phe
          35          40          45

Glu Asp Asn Val Leu Val  Arg Asn Gln Leu Glu Thr  Lys Gly Glu Gly
          50          55          60

Gly Val Leu Val Ile Asp Gly Gly Gly Ser Met Arg Cys Ala Leu Val
65          70          75          80

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Gly Gly Asn Leu Gly Gln Leu Ala Gln Asn Asn Gly Trp Ser Gly Ile  
 85 90 95

Val Val Asn Gly Cys Val Arg Asp Val Asp Glu Ile Asn Asp Cys Asp  
 100 105 110

Val Gly Val Arg Ala Leu Gly Ser Asn Pro Leu Lys Ser Thr Lys Lys  
 115 120 125

Gly His Gly Glu Lys Asn Val Pro Val His Ile Gly Gly Thr Leu Ile  
 130 135 140

Arg Asp Gly Glu Trp Leu Tyr Ala Asp Ser Asp Gly Ile Leu Ile Ser  
 145 150 155 160

Lys Thr Glu Leu Ser Val  
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<210> 2111

<211> 1299

<212> DNA

<213> Arabidopsis thaliana

<400> 2111

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<210> 2112

<211> 432

<212> PRT

<213> Arabidopsis thaliana

<400> 2112

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Leu Ile Phe Phe Cys Cys Ile Leu Phe Ser Ala Leu Ala Ser Ser Leu  
35 40 45

Pro Val Ser Asp Pro Glu Leu Val Val Glu Glu Val His Arg Lys Ile  
50 55 60

Asn Glu Ser Ile Ser Arg Arg Lys Leu Gly Phe Phe Ser Cys Gly Ser  
65 70 75 80

Gly Asn Pro Ile Asp Asp Cys Trp Arg Cys Asp Lys Asp Trp Glu Lys  
85 90 95

Asn Arg Lys Arg Leu Ala Asp Cys Gly Ile Gly Phe Gly Lys Asn Ala  
100 105 110

Ile Gly Gly Arg Asp Gly Glu Ile Tyr Val Val Thr Asp Pro Gly Asn  
115 120 125

Asp Asp Pro Val Asn Pro Arg Pro Gly Thr Leu Arg Tyr Ala Val Ile  
130 135 140

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Gln Asp Glu Pro Leu Trp Ile Ile Phe Lys Arg Asp Met Thr Ile Gln  
145 150 155 160

Leu Lys Glu Glu Leu Ile Met Asn Ser Phe Lys Thr Leu Asp Gly Arg  
165 170 175

Gly Ala Ser Val His Ile Ser Gly Gly Pro Cys Ile Thr Ile Gln Tyr  
180 185 190

Val Thr Asn Ile Ile Ile His Gly Leu His Ile His Asp Cys Lys Gln  
195 200 205

Gly Gly Asn Thr Tyr Val Arg Asp Ser Pro Glu His Tyr Gly Tyr Arg  
210 215 220

Thr Val Ser Asp Gly Asp Gly Val Ser Ile Phe Gly Gly Ser His Val  
225 230 235 240

Trp Val Asp His Cys Ser Leu Ser Asn Cys Asn Asp Gly Leu Ile Asp  
245 250 255

Ala Ile Arg Gly Ser Thr Ala Ile Thr Ile Ser Asn Asn Tyr Leu Thr  
260 265 270

His His Asn Lys Val Met Leu Leu Gly His Ser Asp Thr Tyr Glu Gln  
275 280 285

Asp Lys Asn Met Gln Val Thr Ile Ala Phe Asn His Phe Gly Glu Gly  
290 295 300

Leu Val Gln Arg Met Pro Arg Cys Arg His Gly Tyr Phe His Val Val  
305 310 315 320

Asn Asn Asp Tyr Thr His Trp Glu Met Tyr Ala Ile Gly Gly Ser Ala  
325 330 335

Asn Pro Thr Ile Asn Ser Gln Gly Asn Arg Phe Leu Ala Pro Asp Asp  
340 345 350

Ser Ser Ser Lys Glu Val Thr Lys His Glu Asp Ala Pro Glu Asp Glu  
355 360 365

Trp Arg Asn Trp Asn Trp Arg Ser Glu Gly Asp Leu Leu Leu Asn Gly  
370 375 380

Ala Phe Phe Thr Tyr Ser Gly Ala Gly Pro Ala Lys Ser Ser Ser Tyr  
3061

385

390

400

Ser Lys Ala Ser Ser Leu Ala Ala Arg Pro Ser Ser His Val Gly Glu  
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&lt;210&gt; 2113

&lt;211&gt; 1878

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2113

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<212> PRT

<213> Arabidopsis thaliana

<400> 2114

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 35 40 45

Gly Ser Ile Ala Asn Phe Gly Leu Pro Asp Tyr Gly Gly Phe Leu Ile  
 50 55 60

Gly Ser Val Val Tyr Pro Asp Ser Lys Thr Asp Gly Cys Ser Ala Phe  
 65 70 75 80

Gly Lys Thr Phe Lys Pro Lys Phe Pro Arg Pro Thr Ile Leu Leu Leu  
 85 90 95

Asp Arg Gly Gly Cys Tyr Phe Ala Leu Lys Ala Trp His Ala Gln Gln  
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Ala Gly Ala Ala Ala Val Leu Val Ala Asp Asn Val Asp Glu Pro Leu  
115 120

Leu Thr Met Asp Ser Pro Glu Glu Ser Lys Asp Ala Asp Gly Phe Ile  
130 135 140

Glu Lys Leu Thr Ile Pro Ser Val Leu Ile Asp Lys Ser Phe Gly Asp  
145 150 155 160

Asp Leu Arg Gln Gly Phe Gln Lys Gly Lys Asn Ile Val Ile Lys Leu  
165 170 175

Asp Trp Arg Glu Ser Val Pro His Pro Asp Lys Arg Val Glu Tyr Glu  
180 185 190

Leu Trp Thr Asn Ser Asn Asp Glu Cys Gly Ala Arg Cys Asp Glu Gln  
195 200 205

Met Asp Phe Val Lys Asn Phe Lys Gly His Ala Gln Ile Leu Glu Lys  
210 215 220

Gly Gly Tyr Thr Ala Phe Thr Pro His Tyr Ile Thr Trp Phe Cys Pro  
225 230 235 240

Phe Gln Phe Ile Asn Ser Pro His Cys Lys Ser Gln Cys Ile Asn His  
245 250 255

Gly Arg Tyr Cys Ala Pro Asp Pro Glu Asp Asn Phe Arg Glu Gly Tyr  
260 265 270

Glu Gly Lys Asp Val Val Leu Glu Asn Leu Arg Gln Leu Cys Val His  
275 280 285

Arg Val Ala Asn Glu Ser Ser Arg Pro Trp Val Trp Trp Asp Tyr Val  
290 295 300

Thr Asp Phe His Ser Arg Cys Ser Met Lys Glu Lys Lys Tyr Ser Ile  
305 310 315 320

Asp Cys Ala Glu Ser Val Ile Lys Ser Leu Asn Leu Pro Ile Glu Lys  
325 330 335

Ile Lys Lys Cys Ile Gly Asp Pro Glu Ala Asp Thr Glu Asn Gln Val  
340 345 350

Leu Arg Thr Glu Gln Val Ser Gln Ile Gly Arg Gly Asn Arg Gly Asp  
355 360 365

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Val Thr Ile Leu Pro Thr Leu Val Ile Asn Asn Ala Gln Tyr Arg Gly  
370 375 380

Arg Leu Glu Arg Thr Ala Val Leu Lys Ala Ile Cys Ala Gly Phe Asn  
385 390 395 400

Glu Thr Ser Glu Pro Ala Ile Cys Leu Asn Thr Gly Leu Glu Thr Asn  
405 410 415

Glu Cys Leu Glu Asn Asn Gly Gly Cys Trp Gln Asp Thr Lys Ala Asn  
420 425 430

Ile Thr Ala Cys Gln Asp Thr Phe Arg Gly Arg Leu Cys Glu Cys Pro  
435 440 445

Val Val Lys Gly Val Gln Tyr Lys Gly Asp Gly Tyr Thr Ser Cys Thr  
450 455 460

Pro Tyr Gly Pro Ala Arg Cys Thr Met Asn Asn Gly Gly Cys Trp Ser  
465 470 475 480

Asp Thr Arg Asn Gly Leu Thr Phe Ser Ala Cys Ser Asp Ser Val Ser  
485 490 495

Thr Gly Cys Lys Cys Pro Glu Gly Phe Gln Gly Asp Gly Leu Thr Cys  
500 505 510

Glu Asp Ile Asn Glu Cys Lys Glu Arg Ser Val Cys Gln Cys Ser Gly  
515 520 525

Cys Arg Cys Lys Asn Ser Trp Gly Gly Tyr Lys Cys Ser Cys Ser Gly  
530 535 540

Asp Arg Leu Tyr Ile Asn Asp Gln Asp Thr Cys Ile Glu Arg Tyr Gly  
545 550 555 560

Ser Lys Thr Ala Trp Trp Leu Thr Phe Leu Ile Leu Ala Ile Val Ala  
565 570 575

Val Ala Gly Leu Ala Gly Tyr Ile Phe Tyr Lys Tyr Arg Phe Arg Ser  
580 585 590

Tyr Met Asp Ser Glu Ile Met Thr Ile Met Ser Gln Tyr Met Pro Leu  
595 600 605

Glu Ser Gln Arg Ala Arg Glu Val Pro Ser Glu Ala Glu Pro Phe Thr  
Page 3065

610

615

Leu  
625

<210> 2115

<211> 447

<212> DNA

<213> Arabidopsis thaliana

<400> 2115

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<210> 2116

<211> 148

<212> PRT

<213> Arabidopsis thaliana

<400> 2116

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20 25 30	
Phe Leu Lys Ile Gly Ala Val Gly Val Thr Lys Ser Leu Ala Glu Asp	
35 40 45	
Thr Tyr Lys Ala Ile Asp Lys Gly Ser Leu Ser Lys Ser Thr Leu Glu	
50 55 60	



His Ala Leu Lys Lys Leu Cys Lys Glu Gly Val Tyr Trp Gly Ala Ala  
 65 70 75 80

Gly Gly Val Tyr Ile Gly Thr Glu Tyr Gly Ile Glu Arg Ile Arg Gly  
 85 90 95

Ser Arg Asp Trp Lys Asn Ala Met Leu Ala Gly Ala Ala Thr Gly Ala  
 100 105 110

Val Leu Ser Ala Val Gly Lys Lys Gly Lys Asp Thr Ile Val Ile Asp  
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Ala Ile Leu Gly Gly Ala Leu Ala Thr Ala Ser Gln Phe Val Asn Asn  
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His Tyr Phe Tyr  
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<210> 2117

<211> 1314

<212> DNA

<213> Arabidopsis thaliana

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 aatactcgtt acactaagca gagaggggca ttacatcac tgaaagaatg tgcgatttca 180  
 ttagctttat cggttggttt aatggtttca gtaccttcga ttgctttgcc tcccaatgct 240  
 cacgcagtgg cgaatccagt gattccagat gtttcagtgt tgatctccgg tcctccgatt 300  
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<210> 2118

<211> 437

<212> PRT

<213> Arabidopsis thaliana

<400> 2118

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20 25 30

Leu Glu Val Arg Cys Ser Ser Gly Asn Thr Arg Tyr Thr Lys Gln Arg  
35 40 45

Gly Ala Phe Thr Ser Leu Lys Glu Cys Ala Ile Ser Leu Ala Leu Ser  
50 55 60

Val Gly Leu Met Val Ser Val Pro Ser Ile Ala Leu Pro Pro Asn Ala  
65 70 75 80

His Ala Val Ala Asn Pro Val Ile Pro Asp Val Ser Val Leu Ile Ser  
85 90 95

Gly Pro Pro Ile Lys Asp Pro Glu Ala Leu Leu Arg Tyr Ala Leu Pro  
100 105 110

Ile Asp Asn Lys Ala Ile Arg Glu Val Gln Lys Pro Leu Glu Asp Ile  
115 120 125

Thr Asp Ser Leu Lys Ile Ala Gly Val Lys Ala Leu Asp Ser Val Glu  
130 135 140

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Arg Asn Val Arg Gln Ala Ser Arg Thr Leu Gln Gln Gly Lys Ser Ile  
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 Ile Val Ala Gly Phe Ala Glu Ser Lys Lys Asp His Gly Asn Glu Met  
 165 170 175  
 Ile Glu Lys Leu Glu Ala Gly Met Gln Asp Met Leu Lys Ile Val Glu  
 180 185 190  
 Asp Arg Lys Arg Asp Ala Val Ala Pro Lys Gln Lys Glu Ile Leu Lys  
 195 200 205  
 Tyr Val Gly Gly Ile Glu Glu Asp Met Val Asp Gly Phe Pro Tyr Glu  
 210 215 220  
 Val Pro Glu Glu Tyr Arg Asn Met Pro Leu Leu Lys Gly Arg Ala Ser  
 225 230 235 240  
 Val Asp Met Lys Val Lys Ile Lys Asp Asn Pro Asn Ile Glu Asp Cys  
 245 250 255  
 Val Phe Arg Ile Val Leu Asp Gly Tyr Asn Ala Pro Val Thr Ala Gly  
 260 265 270  
 Asn Phe Val Asp Leu Val Glu Arg His Phe Tyr Asp Gly Met Glu Ile  
 275 280 285  
 Gln Arg Ser Asp Gly Phe Val Val Gln Thr Gly Asp Pro Glu Gly Pro  
 290 295 300  
 Ala Glu Gly Phe Ile Asp Pro Ser Thr Glu Lys Thr Arg Thr Val Pro  
 305 310 315  
 Leu Glu Ile Met Val Thr Gly Glu Lys Thr Pro Phe Tyr Gly Ser Thr  
 325 330 335  
 Leu Glu Glu Leu Gly Leu Tyr Lys Ala Gln Val Val Ile Pro Phe Asn  
 340 345 350  
 Ala Phe Gly Thr Met Ala Met Ala Arg Glu Glu Phe Glu Asn Asp Ser  
 355 360 365  
 Gly Ser Ser Gln Val Phe Trp Leu Leu Lys Glu Ser Glu Leu Thr Pro  
 370 375 380  
 Ser Asn Ser Asn Ile Leu Asp Gly Arg Tyr Ala Val Phe Gly Tyr Val  
 Page 3069

385

390

395

400

Thr Asp Asn Glu Asp Phe Leu Ala Asp Leu Lys Val Gly Asp Val Ile  
 405 410 415

Glu Ser Ile Gln Val Val Ser Gly Leu Glu Asn Leu Ala Asn Pro Ser  
 420 425 430

Tyr Lys Ile Ala Gly  
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&lt;210&gt; 2119

&lt;211&gt; 1275

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2119

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<210> 2120

<211> 424

<212> PRT

<213> Arabidopsis thaliana

<400> 2120

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20 25 30

Val Thr Cys Gly Tyr Arg Ser Glu Ser Phe Ser Phe Pro Asn Gly Val  
35 40 45

Ser Val Ser Arg Ser Asp Trp Gln Ser Ser Cys Ala Ile Leu Ser Ser  
50 55 60

Lys Val Ala Ser Val Glu Asn Thr Gly Gly Leu Ala Asp Lys Ile Ala  
65 70 75 80

Ala Val Asn Gly His Thr Asn Gly Ser Val Asn Leu Gly Leu Val Ala  
85 90 95

Val Glu Ser Thr Asn Gly Lys Leu Ala Pro Ala Gln Pro Leu Thr Ile  
100 105 110

Thr Asp Leu Ser Pro Ala Pro Leu His Gly Ser Ser Leu Arg Val Ala  
115 120 125

Tyr Gln Gly Val Pro Gly Ala Tyr Ser Glu Ala Ala Gly Lys Ala  
130 135 140

Tyr Pro Asn Cys Asp Ala Ile Pro Cys Asp Gln Phe Asp Val Ala Phe  
145 150 155 160

Gln Ala Val Glu Leu Trp Ile Ala Asp Arg Ala Val Leu Pro Val Glu  
165 170 175

047-E2F-PCT.ST25.txt

Asn Ser Leu Gly 180 Gly Ser Ile His Arg 185 Asn Tyr Asp Leu 190 Leu Arg  
 His Arg 195 Leu His Ile Val Gly 200 Glu Val Gln Ile Pro Val 205 His His Cys  
 Leu 210 Leu Ala Leu Pro Gly 215 Val Arg Thr Asp Cys 220 Ser Arg Val Ile  
 Ser 225 His Pro Gln Ala 230 Leu Ala Gln Thr Glu 235 His Ser Leu Asp Val 240 Leu  
 Thr 245 Pro His Ala 245 Arg Glu Ala Phe 250 His Asp Thr Ala 255 Ala 255  
 Glu Tyr Ile 260 Ser Ala Asn Asp Leu 265 His Asp Thr Ala 270 Val 270 Ala Ser  
 Ala Arg 275 Ala Ala Glu Leu Tyr Asn 280 Leu Gln Ile Leu 285 Ala Asp Gly Ile  
 Gln 290 Asp Pro Gly Asn 295 Val Thr Arg Phe Leu 300 Met Leu Ala Arg Glu  
 Pro 305 Ile Ile Pro Arg 310 Thr Asp Arg Pro Phe 315 Lys Thr Ser Ile Val 320 Phe  
 Ala Ala Gln Glu 325 His Lys Gly Thr Ser 330 Val Leu Phe Lys Val 335 Leu Ser  
 Ala Phe Ala 340 Phe Arg Asp Ile Ser 345 Leu Thr Lys Ile Glu 350 Ser Arg Pro  
 His 355 His Asn Arg Pro Leu Arg 360 Val Val Gly Asp Gly 365 Ser Phe Gly Thr  
 Ser 370 Lys Asn Phe Glu Tyr 375 Met Phe Tyr Val Asp 380 Phe Glu Ala Ser Met  
 Ala 385 Glu Pro Arg Ala 390 Gln Asn Ala Leu Ala 395 Glu Val Gln Glu Tyr Thr  
 Ser 405 Phe Leu Arg 405 Val Leu Gly Ser Tyr 410 Pro Met Asp Met Thr 415 Pro Trp  
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&lt;210&gt; 2121

&lt;211&gt; 1422

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2121

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&lt;210&gt; 2122

&lt;211&gt; 473

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2122

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 20 25 30

Arg Pro Leu Arg Arg Gln Gln Arg Ser Phe Ile Ser Ala Ser Ala Ser  
 35 40 45

Thr Val Ser Ala Pro Lys Arg Glu Thr Asp Pro Lys Lys Arg Val Val  
 50 55 60

Ile Thr Gly Met Gly Leu Val Ser Val Phe Gly Asn Asp Val Asp Ala  
 65 70 75 80

Tyr Tyr Glu Lys Leu Leu Ser Gly Glu Ser Gly Ile Ser Leu Ile Asp  
 85 90 95

Arg Phe Asp Ala Ser Lys Phe Pro Thr Arg Phe Gly Gly Gln Ile Arg  
 100 105 110

Gly Phe Ser Ser Glu Gly Tyr Ile Asp Gly Lys Asn Glu Arg Arg Leu  
 115 120 125

Asp Asp Cys Leu Lys Tyr Cys Ile Val Ala Gly Lys Lys Ala Leu Glu  
 130 135 140

Ser Ala Asn Leu Gly Gly Asp Lys Leu Asn Thr Ile Asp Lys Arg Lys  
 145 150 155 160

Ala Gly Val Leu Val Gly Thr Gly Met Gly Gly Leu Thr Val Phe Ser  
 165 170 175

Glu Gly Val Gln Asn Leu Ile Glu Lys Gly His Arg Arg Ile Ser Pro  
 180 185 190

Phe Phe Ile Pro Tyr Ala Ile Thr Asn Met Gly Ser Ala Leu Leu Ala  
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 Ala Thr Ser Asn Tyr Cys Phe Tyr Ala Ala Ala Asn His Ile Arg Arg  
 225 230 235 240  
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 245 250 255  
 Pro Ile Gly Leu Gly Gly Phe Val Ala Cys Arg Ala Leu Ser Gln Arg  
 260 265 270  
 Asn Asp Asp Pro Gln Thr Ala Ser Arg Pro Trp Asp Lys Ala Arg Asp  
 275 280 285  
 Gly Phe Val Met Gly Glu Gly Ala Gly Val Leu Val Met Glu Ser Leu  
 290 295 300  
 Glu His Ala Met Lys Arg Gly Ala Pro Ile Val Ala Glu Tyr Leu Gly  
 305 310 315 320  
 Gly Ala Val Asn Cys Asp Ala His His Met Thr Asp Pro Arg Ala Asp  
 325 330 335  
 Gly Leu Gly Val Ser Ser Cys Ile Glu Arg Cys Leu Glu Asp Ala Gly  
 340 345 350  
 Val Ser Pro Glu Glu Val Asn Tyr Ile Asn Ala His Ala Thr Ser Thr  
 355 360 365  
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 Ser Thr Ser Gly Ile Lys Ile Asn Ala Thr Lys Ser Met Ile Gly His  
 385 390 395 400  
 Cys Leu Gly Ala Ala Gly Gly Leu Glu Ala Ile Ala Thr Val Lys Ala  
 405 410 415  
 Ile Asn Thr Gly Trp Leu His Pro Ser Ile Asn Gln Phe Asn Pro Glu  
 420 425 430  
 Gln Ala Val Asp Phe Asp Thr Val Pro Asn Glu Lys Lys Gln His Glu  
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&lt;212&gt; PRT

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047-E2F-PCT.ST25.txt

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Phe Asn Met Tyr His Thr Glu His Glu Leu Leu Arg Tyr Ile His Lys  
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Trp Pro Ser Phe Thr Asp Ile His Pro Phe Ala Pro Val Glu Gln Ala  
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Gln Gly Tyr Gln Glu Met Phe Glu Asn Leu Gly Asp Leu Leu Cys Thr  
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Ile Thr Gly Phe Asp Ser Phe Ser Leu Gln Pro Asn Ala Gly Ala Ala  
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Gly Asp His His Arg Asn Val Cys Ile Ile Pro Val Ser Ala His Gly  
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Thr Asn Pro Ala Ser Ala Ala Met Cys Gly Met Lys Ile Ile Thr Val  
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Gly Thr Asp Ala Lys Gly Asn Ile Asn Ile Glu Glu Val Arg Lys Ala  
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His Leu Asn Leu His Lys Thr Phe Cys Ile Pro His Gly Gly Gly Gly  
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Pro Gly Met Gly Pro Ile Gly Val Lys Asn His Leu Ala Pro Phe Leu  
785 790 795 800

Pro Ser His Pro Val Ile Pro Thr Gly Gly Ile Pro Gln Pro Glu Lys  
805 810 815

Thr Ala Pro Leu Gly Ala Ile Ser Ala Ala Pro Trp Gly Ser Ala Leu  
820 825 830

Ile Leu Pro Ile Ser Tyr Thr Tyr Ile Ala Met Met Gly Ser Gly Gly  
835 840 845

Leu Thr Asp Ala Ser Lys Ile Ala Ile Leu Asn Ala Asn Tyr Met Ala  
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Lys Arg Leu Glu Lys His Tyr Pro Val Leu Phe Arg Gly Val Asn Gly  
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Thr Val Ala His Glu Phe Ile Ile Asp Leu Arg Gly Phe Lys Asn Thr  
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Ala Gly Ile Glu Pro Glu Asp Val Ala Lys Arg Leu Met Asp Tyr Gly  
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Phe His Gly Pro Thr Met Ser Trp Pro Val Pro Gly Thr Leu Met Ile  
915 920 925

Glu Pro Thr Glu Ser Glu Ser Lys Ala Glu Leu Asp Arg Phe Cys Asp  
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Ala Leu Ile Ser Ile Arg Glu Glu Ile Ala Gln Ile Glu Lys Gly Asn  
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Ala Asp Val Gln Asn Asn Val Leu Lys Gly Ala Pro His Pro Pro Ser  
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Leu Leu Met Ala Asp Thr Trp Lys Lys Pro Tyr Ser Arg Glu Tyr Ala  
Page 3081

980

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Ser Ile Thr Ala Leu Leu Ile Gly Leu Gly Thr Gly Val Thr Ile Leu  
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Leu Ile Ser Lys Gly Lys Ser Ser His Leu Leu Val Phe Ser Glu Asp  
65 70 75 80

Leu Phe Phe Ile Tyr Leu Leu Pro Pro Ile Ile Phe Asn Ala Gly Phe  
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Gln Val Lys Lys Lys Gln Phe Phe Arg Asn Phe Val Thr Ile Met Leu  
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Phe Gly Ala Val Gly Thr Ile Ile Ser Cys Thr Ile Ile Ser Leu Gly  
115 120 125

Val Thr Gln Phe Phe Lys Lys Leu Asp Ile Gly Thr Phe Asp Leu Gly  
Page 3083

130

135

Asp Tyr Leu Ala Ile Gly Ala Ile Phe Ala Ala Thr Asp Ser Val Cys  
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<211> 1011

<212> PRT

<213> Arabidopsis thaliana

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Lys Ser Gln Val Ser Glu Gly Lys Arg Asp Val Leu Ser Ser Trp Asn  
 35 40 45

Asn Ser Phe Pro Leu Cys Asn Trp Lys Trp Val Thr Cys Gly Arg Lys  
 50 55 60

His Lys Arg Val Thr His Leu Asn Leu Gly Gly Leu Gln Leu Gly Gly  
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Ile Val Ser Pro Ser Ile Gly Asn Val Ser Phe Leu Ile Ser Leu Asp  
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Leu Ser Asp Asn Ala Phe Gly Gly Ile Ile Pro Arg Glu Val Gly Asn  
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 Gly Ile Pro Ala Thr Leu Ser Asn Cys Ser Arg Leu Asn Leu Asp  
 130 135 140  
 Leu Tyr Ser Asn Pro Leu Arg Gln Gly Val Pro Ser Glu Leu Gly Ser  
 145 150 155 160  
 Leu Thr Lys Leu Val Ile Leu Asp Leu Gly Arg Asn Asn Leu Lys Gly  
 165 170 175  
 Lys Leu Pro Arg Ser Leu Gly Asn Leu Thr Ser Leu Lys Ser Leu Gly  
 180 185 190  
 Phe Thr Asp Asn Asn Ile Glu Gly Glu Val Pro Asp Glu Leu Ala Arg  
 195 200 205  
 Leu Ser Gln Met Val Gly Leu Gly Leu Ser Met Asn Lys Phe Phe Gly  
 210 215 220  
 Val Phe Pro Pro Ala Ile Tyr Asn Leu Ser Ala Leu Glu Asp Leu Phe  
 225 230 235 240  
 Leu Phe Gly Ser Gly Phe Ser Gly Ser Leu Lys Pro Asp Phe Gly Asn  
 245 250 255  
 Leu Leu Pro Asn Ile Arg Glu Leu Asn Leu Gly Glu Asn Asp Leu Val  
 260 265 270  
 Gly Ala Ile Pro Thr Thr Leu Ser Asn Ile Ser Thr Leu Gln Lys Phe  
 275 280 285  
 Gly Ile Asn Lys Asn Met Met Thr Gly Gly Ile Tyr Pro Asn Phe Gly  
 290 295 300  
 Lys Val Pro Ser Leu Gln Tyr Leu Asp Leu Ser Glu Asn Pro Leu Gly  
 305 310 315 320  
 Ser Tyr Thr Phe Gly Asp Leu Glu Phe Ile Asp Ser Leu Thr Asn Cys  
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 Thr His Leu Gln Leu Leu Ser Val Gly Tyr Thr Arg Leu Gly Gly Ala  
 340 345 350

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Leu Pro Thr Ser Ile Ala Asn Met Ser Thr Glu Leu Ile Ser Leu Asn  
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 Pro Leu Pro Thr Ser Leu Gly Lys Leu Leu Arg Leu Gly Leu Leu Ser  
 405 410 415  
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 420 425 430  
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 Ile Gly Tyr Asn Lys Leu Asn Gly Thr Ile Pro Lys Glu Ile Met Gln  
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 Cys Leu Ala Met Glu Gln Leu Phe Leu Gln Gly Asn Ser Phe Asp Gly  
 530 535 540  
 Ala Ile Pro Asn Ile Arg Gly Leu Met Gly Val Arg Arg Val Asp Leu  
 545 550 555 560  
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 565 570 575  
 Ser Lys Leu Glu Tyr Leu Asn Leu Ser Ile Asn Asn Phe Thr Gly Lys  
 580 585 590  
 Val Pro Ser Lys Gly Asn Phe Gln Asn Ser Thr Ile Val Phe Val Phe

595

600

605

Gly Asn Lys Asn Leu Cys Gly Gly Ile Lys Asp Leu Lys Leu Lys Pro  
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 Lys Lys Val Ala Ile Leu Val Ser Ile Gly Ile Ala Leu Leu Leu Leu  
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 660 665 670  
 Asn Gln Gln Thr Asn Asn Leu Val Pro Ser Lys Leu Glu Ile Phe His  
 675 680 685  
 Glu Lys Ile Ser Tyr Gly Asp Leu Arg Asn Ala Thr Asn Gly Phe Ser  
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 Ser Ser Asn Met Val Gly Ser Gly Ser Phe Gly Thr Val Phe Lys Ala  
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 Leu Leu Pro Thr Glu Ser Lys Ile Val Ala Val Lys Val Leu Asn Met  
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 Gln Arg Arg Gly Ala Met Lys Ser Phe Met Ala Glu Cys Glu Ser Leu  
 740 745 750  
 Lys Asp Thr Arg His Arg Asn Leu Val Lys Leu Leu Thr Ala Cys Ala  
 755 760 765  
 Ser Thr Asp Phe Gln Gly Asn Glu Phe Arg Ala Leu Ile Tyr Glu Tyr  
 770 775 780  
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 785 790 795 800  
 Glu Ile Arg Arg Pro Pro Arg Thr Leu Thr Leu Leu Glu Arg Leu Asn  
 805 810 815  
 Ile Val Ile Asp Val Ala Ser Val Leu Asp Tyr Leu His Val His Cys  
 820 825 830  
 His Glu Pro Ile Ala His Cys Asp Leu Lys Pro Ser Asn Val Leu Leu  
 835 840 845



Glu Asp Asp Leu Thr Ala His Val Ser Asp Phe Gly Leu Ala Arg Leu  
850 855 860

Leu Leu Lys Phe Asp Lys Glu Ser Phe Leu Asn Gln Leu Ser Ser Ala  
865 870 875 880

Gly Val Arg Gly Thr Ile Gly Tyr Ala Ala Pro Glu Tyr Gly Met Gly  
885 890 895

Gly Gln Pro Ser Ile His Gly Asp Val Tyr Ser Phe Gly Val Leu Leu  
900 905 910

Leu Glu Met Phe Thr Gly Lys Arg Pro Thr Asp Glu Leu Phe Gly Gly  
915 920 925

Asn Leu Thr Leu His Ser Tyr Thr Lys Leu Ala Leu Pro Glu Lys Val  
930 935 940

Phe Glu Ile Ala Asp Lys Ala Ile Leu His Ile Gly Leu Arg Val Gly  
945 950 955 960

Phe Arg Thr Ala Glu Cys Leu Thr Leu Val Leu Glu Val Gly Leu Arg  
965 970 975

Cys Cys Glu Glu Tyr Pro Thr Asn Arg Leu Ala Thr Ser Glu Val Ala  
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Pro Arg Arg  
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<211> 2352

<212> DNA

<213> Arabidopsis thaliana

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<211> 783

<212> PRT

<213> Arabidopsis thaliana

<400> 2130

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 35 40 45

Ser Pro Tyr Leu Val Asp Lys Asp Gly Val Pro Leu Asp Val Ser Ala  
 50 55 60

Gly Ser Phe Ile Gly Phe Asn Leu Asp Gly Glu Pro Lys Ser His His  
 65 70 75 80

Val Ala Ser Ile Gly Lys Leu Lys Asn Ile Arg Phe Met Ser Ile Phe  
 85 90 95

Arg Phe Lys Val Trp Trp Thr Thr His Trp Val Gly Ser Asn Gly Arg  
 100 105 110

Asp Ile Glu Asn Glu Thr Gln Ile Ile Ile Leu Asp Gln Ser Gly Ser  
 115 120 125

Asp Ser Gly Pro Gly Ser Gly Ser Gly Arg Pro Tyr Val Leu Leu Leu  
 130 135 140

Pro Leu Leu Glu Gly Ser Phe Arg Ser Ser Phe Gln Ser Gly Glu Asp  
 145 150 155 160

Asp Asp Val Ala Val Cys Val Glu Ser Gly Ser Thr Glu Val Thr Gly  
 Page 3093

Ser Glu Phe Arg Gln Ile Val Tyr Val His Ala Gly Asp Asp Pro Phe  
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 Lys Leu Val Lys Asp Ala Met Lys Val Ile Arg Val His Met Asn Thr  
 195 200 205  
 Phe Lys Leu Leu Glu Glu Lys Ser Pro Pro Gly Ile Val Asp Lys Phe  
 210 215 220  
 Gly Trp Cys Thr Trp Asp Ala Phe Tyr Leu Thr Val Asn Pro Asp Gly  
 225 230 235 240  
 Val His Lys Gly Val Lys Cys Leu Val Asp Gly Gly Cys Pro Pro Gly  
 245 250 255  
 Leu Val Leu Ile Asp Asp Gly Trp Gln Ser Ile Gly His Asp Ser Asp  
 260 265 270  
 Gly Ile Asp Val Glu Gly Met Asn Ile Thr Val Ala Gly Glu Gln Met  
 275 280 285  
 Pro Cys Arg Leu Leu Lys Phe Glu Glu Asn His Lys Phe Lys Asp Tyr  
 290 295 300  
 Val Ser Pro Lys Asp Gln Asn Asp Val Gly Met Lys Ala Phe Val Arg  
 305 310 315 320  
 Asp Leu Lys Asp Glu Phe Ser Thr Val Asp Tyr Ile Tyr Val Trp His  
 325 330 335  
 Ala Leu Cys Gly Tyr Trp Gly Gly Leu Arg Pro Glu Ala Pro Ala Leu  
 340 345 350  
 Pro Pro Ser Thr Ile Ile Arg Pro Glu Leu Ser Pro Gly Leu Lys Leu  
 355 360 365  
 Thr Met Glu Asp Leu Ala Val Asp Lys Ile Ile Glu Thr Gly Ile Gly  
 370 375 380  
 Phe Ala Ser Pro Asp Leu Ala Lys Glu Phe Tyr Glu Gly Leu His Ser  
 385 390 395 400  
 His Leu Gln Asn Ala Gly Ile Asp Gly Val Lys Val Asp Val Ile His  
 405 410 415

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Ile Leu Glu Met Leu Cys Gln Lys Tyr Gly Gly Arg Val Asp Leu Ala  
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Lys Ala Tyr Phe Lys Ala Leu Thr Ser Ser Val Asn Lys His Phe Asn  
435 440 445

Gly Asn Gly Val Ile Ala Ser Met Glu His Cys Asn Asp Phe Met Phe  
450 455 460

Leu Gly Thr Glu Ala Ile Ser Leu Gly Arg Val Gly Asp Asp Phe Trp  
465 470 475 480

Cys Thr Asp Pro Ser Gly Asp Pro Asn Gly Thr Phe Trp Leu Gln Gly  
485 490 495

Cys His Met Val His Cys Ala Tyr Asn Ser Leu Trp Met Gly Asn Phe  
500 505 510

Ile Gln Pro Asp Trp Asp Met Phe Gln Ser Thr His Pro Cys Ala Glu  
515 520 525

Phe His Ala Ala Ser Arg Ala Ile Ser Gly Gly Pro Ile Tyr Ile Ser  
530 535 540

Asp Cys Val Gly Lys His Asp Phe Asp Leu Leu Lys Arg Leu Val Leu  
545 550 555 560

Pro Asn Gly Ser Ile Leu Arg Cys Glu Tyr Tyr Ala Leu Pro Thr Arg  
565 570 575

Asp Arg Leu Phe Glu Asp Pro Leu His Asp Gly Lys Thr Met Leu Lys  
580 585 590

Ile Trp Asn Leu Asn Lys Tyr Thr Gly Val Ile Gly Ala Phe Asn Cys  
595 600 605

Gln Gly Gly Gly Trp Cys Arg Glu Thr Arg Arg Asn Gln Cys Phe Ser  
610 615 620

Glu Cys Val Asn Thr Leu Thr Ala Thr Thr Ser Pro Lys Asp Val Glu  
625 630 635 640

Trp Asn Ser Gly Ser Ser Pro Ile Ser Ile Ala Asn Val Glu Glu Phe  
645 650 655

Ala Leu Phe Leu Ser Gln Ser Lys Lys Leu Leu Leu Ser Gly Leu Asn  
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Asp Asp Leu Glu Leu Thr Leu Glu Pro Phe Lys Phe Glu Leu Ile Thr  
675 680 685

Val Ser Pro Val Val Thr Ile Glu Gly Asn Ser Val Arg Phe Ala Pro  
690 695 700

Ile Gly Leu Val Asn Met Leu Asn Thr Ser Gly Ala Ile Arg Ser Leu  
705 710 715 720

Val Tyr Asn Asp Glu Ser Val Glu Val Gly Val Phe Gly Ala Gly Glu  
725 730 735

Phe Arg Val Tyr Ala Ser Lys Lys Pro Val Ser Cys Leu Ile Asp Gly  
740 745 750

Glu Val Val Glu Phe Gly Tyr Glu Asp Ser Met Val Met Val Gln Val  
755 760 765

Pro Trp Ser Gly Pro Asp Gly Leu Ser Ser Ile Gln Tyr Leu Phe  
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<211> 858

<212> DNA

<213> Arabidopsis thaliana

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<211> 285

<212> PRT

<213> Arabidopsis thaliana

<400> 2132

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Leu Ser Lys Pro Thr Thr Phe Ser Gly Pro Lys His Leu Ser Thr Arg  
 35 40 45

Phe Thr Lys Pro Glu Ser Arg Asn Trp Leu Ile Asp Ala Lys Gln Gly  
 50 55 60

Leu Ala Ala Leu Ala Leu Ser Leu Thr Leu Thr Phe Ser Pro Val Gly  
 65 70 75 80

Thr Ala Leu Ala Ser Glu Phe Asn Ile Leu Asn Asp Gly Pro Pro Lys  
 85 90 95

Glu Thr Tyr Val Val Asp Asp Ala Gly Val Leu Ser Arg Val Thr Lys  
 100 105 110

Ser Asp Leu Lys Lys Leu Leu Ser Asp Leu Glu Tyr Arg Lys Lys Leu  
 115 120 125

Arg Leu Asn Phe Ile Thr Val Arg Lys Leu Thr Ser Lys Ala Asp Ala  
 130 135 140

Phe Glu Tyr Ala Asp Gln Val Leu Glu Lys Trp Tyr Pro Ser Ile Glu  
 145 150 155 160

Glu Gly Asn Asn Lys Gly Ile Val Val Leu Ile Thr Ser Gln Lys Glu  
 165 170 175

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Gly Ala Ile Thr Gly Gly Pro Ala Phe Ile Glu Ala Val Gly Glu Asn  
180 185 190

Ile Leu Asp Ala Thr Val Ser Glu Asn Leu Pro Val Leu Ala Thr Asp  
195 200 205

Glu Lys Tyr Asn Glu Ala Val Tyr Ser Ser Ala Lys Arg Leu Val Ala  
210 215 220

Ala Ile Asp Gly Gln Pro Asp Pro Gly Gly Pro Thr Val Lys Asp Ser  
225 230 235 240

Lys Arg Glu Ser Asn Phe Lys Thr Lys Glu Glu Thr Asp Glu Lys Arg  
245 250 255

Gly Gln Phe Ser Leu Val Val Gly Gly Leu Leu Val Ile Ala Phe Val  
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<211> 768

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 2134

&lt;211&gt; 255

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2134

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35 40 45Ile Tyr Arg Met Phe Gly Arg Glu Lys Pro Val His Lys Val Leu Gly  
50 55 60Gly Gly Lys Pro Ala Asp Val Phe Leu Trp Arg Asp Lys Lys Leu Ser  
65 70 75 80Gly Ala Val Leu Gly Val Ala Thr Ala Ile Trp Val Leu Phe Glu Leu  
85 90 95Val Glu Tyr His Leu Leu Ser Leu Leu Cys His Ile Ser Ile Leu Ala  
100 105 110Leu Gly Gly Leu Phe Leu Trp Ser Asn Ala His Thr Leu Ile Asn Lys  
115 120 125Thr Ser Pro Gln Ile Pro Glu Ile His Val Pro Glu Ala Phe Leu  
130 135 140Val Val Ala Ser Ser Leu Arg Asn Glu Leu Asn Gln Ala Phe Val Ile  
145 150 155 160Leu Arg Ser Ile Ala Leu Gly Arg Asp Leu Lys Lys Phe Leu Met Val  
165 170 175Val Val Gly Leu Trp Ile Ile Ser Val Val Gly Asn Trp Phe Asn Phe  
180 185 190

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Leu Thr Leu Val Tyr Ile Cys Phe Val Ile Leu His Thr Val Pro Met  
195 200 205

Leu Tyr Glu Lys His Glu Asp Lys Val Asp Pro Leu Ala Glu Lys Ala  
210 215 220

Met Lys Glu Leu Gln Lys Gln Tyr Val Val Phe Asp Glu Lys Val Leu  
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245 250 255

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<211> 1611

<212> DNA

<213> Arabidopsis thaliana

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<211> 536

<212> PRT

<213> Arabidopsis thaliana

<400> 2136

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 35 40 45

Ile Tyr Ser Phe Ser Ala Trp Val Lys Leu Arg Glu Gly Asn Asn Lys  
 50 55 60

Lys Val Gly Val Val Phe Arg Thr Glu Asn Gly Arg Phe Val His Gly  
 65 70 75 80

Gly Glu Val Arg Ala Lys Lys Arg Cys Trp Thr Leu Leu Lys Gly Gly  
 85 90 95

Ile Val Pro Asp Val Ser Gly Ser Val Asp Ile Phe Phe Glu Val Gln  
 100 105 110

Gln Leu Ala Ile Tyr Ser Asp Asp Lys Glu Ala Lys Ile Ser Ala Ser  
 115 120 125

047-E2F-PCT.ST25.txt

Asp Val Ser Leu Lys Gln Phe Ser Lys Gln Glu Trp Lys Leu Lys Gln  
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 Thr Tyr Gln Asn Lys Thr Ala Val Lys Gly Ala Val Ile Ser Ile Glu  
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 Gln Thr Lys Pro Ser Phe Leu Leu Gly Cys Ala Met Asn Phe Arg Ile  
 180 185 190  
 Leu Gln Ser Glu Gly Tyr Arg Asn Trp Phe Ala Ser Arg Phe Lys Ile  
 195 200 205  
 Thr Ser Phe Thr Asn Glu Met Lys Trp Tyr Thr Thr Glu Lys Glu Arg  
 210 215 220  
 Gly His Glu Asn Tyr Thr Ala Ala Asp Ser Met Leu Lys Phe Ala Glu  
 225 230 235 240  
 Glu Asn Gly Ile Leu Val Arg Gly His Thr Val Leu Trp Asp Asp Pro  
 245 250 255  
 Leu Met Gln Pro Thr Trp Val Pro Lys Ile Glu Asp Pro Asn Asp Leu  
 260 265 270  
 Met Asn Val Thr Leu Asn Arg Ile Asn Ser Val Met Thr Arg Tyr Lys  
 275 280 285  
 Gly Lys Leu Thr Gly Trp Asp Val Val Asn Glu Asn Val His Trp Asp  
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 305 310 315 320  
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 325 330 335  
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 340 345 350  
 Lys Glu Lys Met Glu Glu Ile Leu Ala Tyr Pro Gly Asn Met Asn Ile  
 355 360 365  
 Lys Gly Ala Ile Gly Ala Gln Gly His Phe Arg Pro Thr Gln Pro Asn  
 370 375 380

047-E2F-PCT.ST25.txt

Leu Ala Tyr Met Arg Ser Ala Leu Asp Thr Leu Gly Ser Leu Gly Leu  
 385 390 395 400  
 Pro Ile Trp Leu Thr Glu Val Asp Met Pro Lys Cys Pro Asn Gln Glu  
 405 410 415  
 Val Tyr Ile Glu Glu Ile Leu Arg Glu Ala Tyr Ser His Pro Ala Val  
 420 425 430  
 Lys Gly Ile Ile Ile Phe Ala Gly Pro Glu Val Ser Gly Phe Asp Lys  
 435 440 445  
 Leu Thr Leu Ala Asp Lys Tyr Phe Asn Asn Thr Ala Thr Gly Asp Val  
 450 455 460  
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 465 470 475 480  
 Ile Phe Met Thr Asp Ser Glu Asn Asp Glu Glu Glu Val Ser Leu Leu  
 485 490 495  
 His Gly His Tyr Asn Val Asn Val Ser His Pro Trp Met Lys Asn Met  
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<211> 1686

<212> DNA

<213> Arabidopsis thaliana

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 atcacaactt tctcacatc caattcaaac gctactctta aatccgacga cagtattgtc 240  
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gataactatt	ggtatagagt	atgcgaaggg	gagacagaat	ctgttgtgca	aaggccttgg	1200
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tggcctaatc	ttgaaaagga	tacttcacca	agctccattt	tatctaccct	ccaggacaaa	1380
atcgaacaag	gaaggaaatc	ttatattgca	acaaatgaac	cagagtattc	tttctttaac	1440
cccttgaaag	acaagtacaa	accccatttt	ctggatgagt	ttaaggatct	ctgggacgag	1500
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ggttacatga	gagcgtctgt	tgatacagag	gtgttcttga	gagggagaaa	gcagattgaa	1620
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agctga						1686

&lt;210&gt; 2138

&lt;211&gt; 561

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2138

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047-E2F-PCT.ST25.txt

Asn Leu Gly Gln Asn Ala Val Ser Leu Ile Gly Ser Ile Gly Phe Ser  
 20 25 30  
 Val Leu Val Ile Gly Val Val Val Phe Thr Ile Ile Ala Ala Thr Tyr  
 35 40 45  
 Glu Pro Glu Asp Pro Leu Phe His Pro Ser Asp Lys Ile Thr Thr Phe  
 50 55 60  
 Leu Thr Ser Asn Ser Asn Ala Thr Leu Lys Ser Asp Asp Ser Ile Val  
 65 70 75 80  
 Lys Thr Gly Glu Asp Phe Met Ala Ala Asn Gln Thr Ala Phe Gly Gly  
 85 90 95  
 Phe Ile Asn Ile Ala Asp Val Glu Thr Ser Glu Asn Asp Ser Asp Gly  
 100 105 110  
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 115 120 125  
 Glu Val Phe His Leu Met Met Lys Ala Thr Met Glu Lys Phe Lys Asp  
 130 135 140  
 Ser His Phe Tyr Lys Phe Gly Lys Pro Val Ile Val Glu Gly Ser Ser  
 145 150 155 160  
 Ser Ser Cys Asp Met Ala Trp Arg Tyr Arg Pro Lys Asp Gly Lys Ala  
 165 170 175  
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 180 185 190  
 Asn Cys Ser Val Ser Val Met Gly Ile Gly Glu Tyr His Ser Gly Val  
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 Asn Ala Arg Lys Arg Lys Arg Pro Gly Phe Arg Asn Ser Ser Gly Gly  
 210 215 220  
 Lys Val Asp Asp Phe Ala Leu Pro Val Val Gly Glu Ala Val Asn Asp  
 225 230 235 240  
 Ser Leu Pro Val Val Glu Ser Glu Asn Val Phe Lys Glu Gly His Tyr  
 245 250 255  
 Leu Val Tyr Ser Gly Gly Gly Asp Arg Cys Lys Ser Met Asn His Phe  
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Leu Trp Ser Phe Leu Cys Ala Leu Gly Glu Ala Gln Tyr Leu Asn Arg  
 275 280 285  
 Thr Leu Val Met Asp Leu Thr Leu Cys Leu Ser Ser Val Tyr Thr Leu  
 290 295 300  
 Ser Gly Gln Asn Glu Glu Gly Lys Asp Phe Arg Phe Tyr Phe Asp Phe  
 305 310 315 320  
 Glu His Leu Lys Glu Ala Ala Ser Met Leu Asp Gln Val Gln Phe Trp  
 325 330 335  
 Ala Asp Trp Gly Lys Trp Tyr Lys Lys Asn Gly Leu Lys Leu His Leu  
 340 345 350  
 Val Glu Asp Phe Arg Val Thr Pro Met Lys Leu Val Asp Val Lys Asp  
 355 360 365  
 Thr Leu Ile Met Arg Lys Phe Gly Thr Val Glu Pro Asp Asn Tyr Trp  
 370 375 380  
 Tyr Arg Val Cys Glu Gly Glu Thr Glu Ser Val Val Gln Arg Pro Trp  
 385 390 395 400  
 Asn Leu Leu Trp Lys Ser Lys Arg Leu Met Glu Ile Val Ser Ala Ile  
 405 410 415  
 Ala Ser Arg Leu Asn Trp Asp Tyr Asp Ala Ile His Ile Glu Arg Gly  
 420 425 430  
 Asp Lys Ala Arg Asn Lys Glu Val Trp Pro Asn Leu Glu Lys Asp Thr  
 435 440 445  
 Ser Pro Ser Ser Ile Leu Ser Thr Leu Gln Asp Lys Ile Glu Gln Gly  
 450 455 460  
 Arg Asn Leu Tyr Ile Ala Thr Asn Glu Pro Glu Leu Ser Phe Phe Asn  
 465 470 475 480  
 Pro Leu Lys Asp Lys Tyr Lys Pro His Phe Leu Asp Glu Phe Lys Asp  
 485 490 495  
 Leu Trp Asp Glu Ser Ser Glu Trp Tyr Ser Glu Thr Thr Lys Leu Asn  
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Gly Gly Asn Pro Val Glu Phe Asp Gly Tyr Met Arg Ala Ser Val Asp  
 515 520 525

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<211> 831

<212> DNA

<213> Arabidopsis thaliana

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 gttgtggctg atgataccaa actcgttaca ggactcgggt gaagtggatt agctatgccg 540  
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 gaatttggat gtgaatcaaa gcttagagtt gatggtgatg gcaagcctta tgtgactgat 660  
 aacagtaatt acattattga ttgtatttt aagactcctt tgaaggatgg attcgtcgcg 720  
 gctaaagaga ttgggaagtt tcaaggagtg gtggagcatg gtctgtttct cggaatggct 780  
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<210> 2140

<211> 276

<212> PRT

<213> Arabidopsis thaliana

&lt;400&gt; 2140

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35 40 45Lys Lys Leu Ala Ala Glu Lys Ala Val Glu Ala Ile Lys Pro Gly Met  
50 55 60Val Leu Gly Leu Gly Thr Gly Ser Thr Ala Ala Phe Ala Val Asp Gln  
65 70 75 80Ile Gly Lys Leu Leu Ser Ser Gly Glu Leu Tyr Asp Ile Val Gly Ile  
85 90 95Pro Thr Ser Lys Arg Thr Glu Glu Gln Ala Arg Ser Leu Gly Ile Pro  
100 105 110Leu Val Gly Leu Asp Thr His Pro Arg Ile Asp Leu Ala Ile Asp Gly  
115 120 125Ala Asp Glu Val Asp Pro Asn Leu Asp Leu Val Lys Gly Arg Gly Gly  
130 135 140Ala Leu Leu Arg Glu Lys Met Val Glu Ala Val Ala Asp Lys Phe Ile  
145 150 155 160Val Val Ala Asp Asp Thr Lys Leu Val Thr Gly Leu Gly Gly Ser Gly  
165 170 175Leu Ala Met Pro Val Glu Val Val Gln Phe Cys Trp Asn Phe Asn Leu  
180 185 190Ile Arg Leu Gln Asp Leu Phe Lys Glu Phe Gly Cys Glu Ser Lys Leu  
195 200 205Arg Val Asp Gly Asp Gly Lys Pro Tyr Val Thr Asp Asn Ser Asn Tyr  
210 215 220Ile Ile Asp Leu Tyr Phe Lys Thr Pro Leu Lys Asp Gly Phe Ala Ala  
225 230 235 240

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Ala Lys Glu Ile Gly Lys Phe Gln Gly Val Val Glu His Gly Leu Phe  
245 250 255

Leu Gly Met Ala Thr Ser Val Ile Ile Ala Gly Lys Asn Gly Val Glu  
260 265 270

Val Met Thr Lys  
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<210> 2141

<211> 852

<212> DNA

<213> Arabidopsis thaliana

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cgacgtgat caagatctcc gtcgattatc gctcccaaat ttcagattgt ggcggctgaa      180
aaatcggagc ctctgaaaat tatgatatca ggagctcctg cttctggtaa aggtacacaa      240
tgcgagctga ttactcaca atatggtttg gtgcatatct ctgctggaga ttgctgagg      300
gctgaaatcg cttctggaag tgaaaatgga agacgtgcta aagaacatat ggagaaagga      360
caattgggtcc ctgatgaaat agttgtaatg atggtaaaag atcgtttatc acagacagat      420
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aagtattcgc ctccagagac agaagagatt gctgttagac tcaccaacg ttttgatgat      660
accgaagaga aggcacaaat gcggctgaag actcataacc aaaatgtgag tgatgtgctt      720
tctatgtacg acgatataac aattaagatc gagggaaacc gctcaaaaga ggaagtgttt      780
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<210> 2142

<211> 283

<212> PRT

<213> Arabidopsis thaliana

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20 25 30Ala Leu His Ser Leu Tyr Arg His Arg Arg Val Ser Arg Ser Pro Ser  
35 40 45Ile Ile Ala Pro Lys Phe Gln Ile Val Ala Ala Glu Lys Ser Glu Pro  
50 55 60Leu Lys Ile Met Ile Ser Gly Ala Pro Ala Ser Gly Lys Gly Thr Gln  
65 70 75 80Cys Glu Leu Ile Thr His Lys Tyr Gly Leu Val His Ile Ser Ala Gly  
85 90 95Asp Leu Leu Arg Ala Glu Ile Ala Ser Gly Ser Glu Asn Gly Arg Arg  
100 105 110Ala Lys Glu His Met Glu Lys Gly Gln Leu Val Pro Asp Glu Ile Val  
115 120 125Val Met Met Val Lys Asp Arg Leu Ser Gln Thr Asp Ser Glu Gln Lys  
130 135 140Gly Trp Leu Leu Asp Gly Tyr Pro Arg Ser Ala Ser Gln Ala Thr Ala  
145 150 155 160Leu Lys Gly Phe Gly Phe Gln Pro Asp Leu Phe Ile Val Leu Glu Val  
165 170 175Pro Glu Glu Ile Leu Ile Glu Arg Val Val Gly Arg Arg Leu Asp Pro  
180 185 190Val Thr Gly Lys Ile Tyr His Leu Lys Tyr Ser Pro Pro Glu Thr Glu  
195 200 205Glu Ile Ala Val Arg Leu Thr Gln Arg Phe Asp Asp Thr Glu Glu Lys  
210 215 220Ala Lys Leu Arg Leu Lys Thr His Asn Gln Asn Val Ser Asp Val Leu  
225 230 235 240

047-E2F-PCT.ST25.txt

Ser Met Tyr Asp Asp Ile Thr Ile Lys Ile Glu Gly Asn Arg Ser Lys  
245 250 255

Glu Glu Val Phe Ala Gln Ile Asp Ser Ser Leu Ser Glu Leu Leu Gln  
260 265 270

Glu Arg Asn Thr Ala Pro Ser Ser Leu Leu Ser  
275 280

<210> 2143

<211> 1137

<212> DNA

<213> Arabidopsis thaliana

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cagccaaaag gagcactcta tgtttcagcg tcgagcgaaa agaagattct gataatgggt 180  
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&lt;210&gt; 2144

&lt;211&gt; 378

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2144

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 20 25 30

Val Gln Tyr Lys Arg Lys Val His Gln Pro Lys Gly Ala Leu Tyr Val  
 35 40 45

Ser Ala Ser Ser Glu Lys Lys Ile Leu Ile Met Gly Gly Thr Arg Phe  
 50 55 60

Ile Gly Leu Phe Leu Ser Arg Ile Leu Val Lys Glu Gly His Gln Val  
 65 70 75 80

Thr Leu Phe Thr Arg Gly Lys Ser Pro Ile Ala Lys Gln Leu Pro Gly  
 85 90 95

Glu Ser Asp Gln Asp Phe Ala Asp Phe Ser Ser Lys Ile Leu His Leu  
 100 105 110

Lys Gly Asp Arg Lys Asp Tyr Asp Phe Val Lys Ser Ser Leu Ser Ala  
 115 120 125

Glu Gly Phe Asp Val Val Tyr Asp Ile Asn Gly Arg Glu Ala Glu Glu  
 130 135 140

Val Glu Pro Ile Leu Glu Ala Leu Pro Lys Leu Glu Gln Tyr Ile Tyr  
 145 150 155 160

Cys Ser Ser Ala Gly Val Tyr Leu Lys Ser Asp Ile Leu Pro His Cys  
 165 170 175

Glu Glu Asp Ala Val Asp Pro Lys Ser Arg His Lys Gly Lys Leu Glu  
 180 185 190

Thr Glu Ser Leu Leu Gln Ser Lys Gly Val Asn Trp Thr Ser Ile Arg  
 195 200 205

Pro Val Tyr Ile Tyr Gly Pro Leu Asn Tyr Asn Pro Val Glu Glu Trp  
 210 215 220

Phe Phe His Arg Leu Lys Ala Gly Arg Pro Ile Pro Val Pro Asn Ser  
 225 230 235 240

Gly Ile Gln Ile Ser Gln Leu Gly His Val Lys Asp Leu Ala Thr Ala  
 245 250 255

Phe Leu Asn Val Leu Gly Asn Glu Lys Ala Ser Arg Glu Ile Phe Asn  
 260 265 270

Ile Ser Gly Glu Lys Tyr Val Thr Phe Asp Gly Leu Ala Lys Ala Cys  
 275 280 285

Ala Lys Ala Gly Gly Phe Pro Glu Pro Glu Ile Val His Tyr Asn Pro  
 290 295 300

Lys Glu Phe Asp Phe Gly Lys Lys Lys Ala Phe Pro Phe Arg Asp Gln  
 305 310 315 320

His Phe Phe Ala Ser Val Glu Lys Ala Lys His Val Leu Gly Trp Lys  
 325 330 335

Pro Glu Phe Asp Leu Val Glu Gly Leu Thr Asp Ser Tyr Asn Leu Asp  
 340 345 350

Phe Gly Arg Gly Thr Phe Arg Lys Glu Ala Asp Phe Thr Thr Asp Asp  
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Met Ile Leu Ser Lys Lys Leu Val Leu Gln  
 370 375

<210> 2145

<211> 552

<212> DNA

<213> Arabidopsis thaliana

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 gatccgaaag ctttcaaga cacaattgat ctgtttgtgg agaggtacag agacaagaac 180

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atctcagtggtgagcaaaatttgttcctctgcgc aaaccaaga aactacctgg tgaacaata 240
gccattggagcaaaatttgttcctctgcgc aaaccaaga aactacctgg tgaacaata 300
tttgaggaat acgagttgga atatggaat gaccgcctag agatgcacat aggagccgtc 360
gaggctggcg atcgagcttt ggtcgttgat gatcttatcg cgactgggtg tactctctgc 420
gctgccatta acttgctcga gagggttgga gcagaagttg tggaatgtgc atgtgtgatc 480
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gagtaccgat ga 552

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&lt;210&gt; 2146

&lt;211&gt; 183

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2146

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```

Thr Lys Ile Arg Val Val Pro Asp Phe Pro Lys Lys Gly Ile Met Phe
20      25      30

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Gln Asp Ile Thr Thr Val Leu Leu Asp Pro Lys Ala Phe Lys Asp Thr
35      40      45

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Ile Asp Leu Phe Val Glu Arg Tyr Arg Asp Lys Asn Ile Ser Val Val
50      55      60

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Ala Gly Ile Glu Ala Arg Gly Phe Leu Phe Gly Pro Pro Ile Ala Leu
65      70      75      80

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```

Ala Ile Gly Ala Lys Phe Val Pro Leu Arg Lys Pro Lys Lys Leu Pro
85      90      95

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Gly Glu Thr Ile Phe Glu Glu Tyr Glu Leu Glu Tyr Gly Asn Asp Arg
100     105     110

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Leu Glu Met His Ile Gly Ala Val Glu Ala Gly Asp Arg Ala Leu Val
115     120     125

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Val Asp Asp Leu Ile Ala Thr Gly Gly Thr Leu Cys Ala Ala Ile Asn
130     135     140

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Leu Leu Glu Arg Val Gly Ala Glu Val Val Glu Cys Ala Cys Val Ile  
 145 150 155 160

Glu Leu Pro Glu Leu Lys Gly Arg Gln Arg Leu Lys Gly Lys Pro Leu  
 165 170 175

Cys Met Leu Val Glu Tyr Arg  
 180

<210> 2147

<211> 2319

<212> DNA

<213> *Arabidopsis thaliana*

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&lt;210&gt; 2148

&lt;211&gt; 772

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2148

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 20 25 30

Ser Thr Leu Asp Leu Ile Glu His Glu Tyr Gln Thr Ser Val Asn Ser  
 35 40 45

Leu Gln Gly Asn Glu Ala Val Asp Gln Thr Glu Thr Ser Gly Gln Lys  
 50 55 60  
 Asn Ser Thr Val Ser Asp Asn Asn Thr Ile Ser Leu Ser Leu Ser Glu  
 65 70 75  
 Glu Pro Ala Leu Glu Thr Leu Lys Glu Ser Val Asp Thr Ser Ala Glu  
 85 90 95  
 Leu Gly Ala Val Thr Asp Glu Val Asp Lys Pro Ser Ser Met Leu Asp  
 100 105 110  
 His Ile Glu Leu Glu Phe Glu Ala His Ile Asn Glu Leu Lys Glu Ala  
 115 120 125  
 Gly Ser Asp Gly Ile Asn Lys Val Glu Glu Ser Lys Asp Asp Glu Glu  
 130 135 140  
 Ala Ala Arg Arg His Lys Met Leu Glu Ala Ile Glu Arg Glu Phe Glu  
 145 150 155 160  
 Ala Ala His Ala Gly Phe Glu Gln Leu Lys Thr Asp Asp Ser Ala Gln  
 165 170 175  
 Gly Leu Asp Asp Glu Gln Ser Ala Lys Arg Gln Ser Met Leu Asp Glu  
 180 185 190  
 Ile Glu Arg Asp Phe Glu Ala Ala Thr Lys Gly Leu Glu Gln Leu Lys  
 195 200 205  
 Ala Asp Asp Leu Thr Gly Ile Asn Asp Glu Glu His Ala Ala Lys Arg  
 210 215 220  
 Gln Lys Met Leu Glu Glu Ile Glu Arg Glu Phe Glu Glu Ala Thr Lys  
 225 230 235 240  
 Gly Leu Glu Glu Leu Arg His Ser Thr Ser Thr Asp Asp Glu Ala  
 245 250 255  
 Gln Ser Ala Lys Arg Gln Asn Met Leu Asp Glu Ile Glu Arg Glu Phe  
 260 265 270  
 Glu Ala Ala Thr Ser Gly Leu Lys Glu Leu Lys Ile Asn Ala His Thr  
 275 280 285  
 Val Lys Asp Asp Val Asp Asp Lys Glu Gln Asp Ala Lys Arg Gln Ser  
 290 295 300

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Met Leu Asp Ala Ile Glu Arg Glu Phe Glu Ala Val Thr Glu Ser Phe  
305 310 315

Lys Gln Leu Glu Asp Ile Ala Asp Asn Lys Ala Glu Gly Asp Asp Glu  
325 330 335

Ser Ala Lys Arg Gln Ser Met Leu Asp Glu Ile Glu Arg Glu Phe Glu  
340 345 350

Ala Ala Thr Asn Ser Leu Lys Gln Leu Asn Leu Asp Asp Phe Ser Glu  
355 360 365

Gly Asp Asp Ser Ala Glu Ser Ala Arg Arg Asn Ser Met Leu Glu Ala  
370 375 380

Ile Glu Arg Glu Phe Glu Ala Ala Thr Lys Gly Leu Glu Glu Leu Lys  
385 390 395 400

Ala Asn Asp Ser Thr Gly Asp Lys Asp Asp Asp Glu His Val Ala Arg  
405 410 415

Arg Lys Ile Met Leu Glu Ala Ile Glu Arg Glu Phe Glu Ala Ala Thr  
420 425 430

Lys Gly Leu Glu Glu Leu Lys Asn Glu Ser Glu Gln Ala Glu Asn Lys  
435 440 445

Arg Asn Ser Met Leu Glu Ala Phe Glu Arg Glu Phe Glu Ala Ala Thr  
450 455 460

Asn Ala Lys Ala Asn Gly Glu Asn Ser Ala Lys Asn Pro Ser Thr Ile  
465 470 475 480

Ser Thr Thr Val Gln Lys Ser Ser Gly Gly Tyr Asn Ala Gly Leu Glu  
485 490 495

Gly Leu Leu Lys Pro Ala Asp Gly Val Cys Gly Cys Phe Asn Lys Asp  
500 505 510

Lys Asp Gly Leu Gln Ala Asp Thr Asp Ser Ser Ile Asn Ile Ala Glu  
515 520 525

Ile Leu Ala Glu Glu Ser Lys Leu Gln Gly Ser Gly Thr Ser Arg Leu  
530 535 540

Thr Thr Ser Leu Asn Asn Leu Val Asp Thr His Arg Lys Glu Thr Ser  
545 550 555 560

Ser Lys Val Gly Ser Val Leu Gly Ser Ser Ser Ser Val Thr Ser Thr  
 565 570 575  
 Thr Ser Glu Ser Ala Ala Thr Ser Glu Ser Ile Glu Ser Leu Lys Gln  
 580 585 590  
 Thr Leu Arg Lys Leu Arg Gly Leu Ser Ala Arg Asp Leu Val Asn His  
 595 600 605  
 Pro Asn Phe Asp Ala Ile Ile Ala Ala Gly Thr Arg Tyr Glu Val Leu  
 610 615 620  
 Ser Ser Ala Ser Ile Gly Tyr Ile Ser Leu Leu Ala Lys Tyr Lys Thr  
 625 630 635 640  
 Val Ile Lys Glu Gly Leu Glu Ala Ser Gln Arg Val Gln Ile Ala Gln  
 645 650 655  
 Thr Arg Ala Lys Leu Leu Lys Glu Thr Ala Met Glu Lys Gln Arg Thr  
 660 665 670  
 Val Asp Ser Val Phe Ala Ala Ala Lys Thr Thr Ala Gln Arg Gly Asp  
 675 680 685  
 Ala Leu His Ile Arg Ile Val Ala Ile Lys Lys Leu Leu Ala Lys Leu  
 690 695 700  
 Glu Ala Glu Lys Val Asp Val Asp Ser Lys Phe Thr Ser Leu Thr Thr  
 705 710 715 720  
 Ser Leu Ser Glu Leu Leu Lys Glu Ala Ser Gln Ala Tyr Glu Glu Tyr  
 725 730 735  
 His Glu Ala Val His Lys Ala Lys Asp Glu Gln Ala Ala Glu Glu Phe  
 740 745 750  
 Ala Val Glu Thr Thr Lys Arg Ala Glu His Ile Trp Val Glu Phe Leu  
 755 760 765  
 Ser Ser Leu Asn  
 770

&lt;210&gt; 2149

&lt;211&gt; 711

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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<400> 2149
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tcgaatttcg cgaatctgag taatgggttt tctctaaaat ctccaattaa tctctgggttt    180
ctcttcaagt ctctgtcctt cactgtccaa gctagagctg ctgcagaaaa aaccgttcac    240
gatttcaccg ttaaggacat tgatgggaag gatgttgctt tgaacaaatt caaggggaaa    300
gttatgttga ttgtcaatgt tgcttcaaga tgtggtttga catcatcaa ttaactcagag    360
ctttcacatc tgtacgagaa atacaaaact caaggatttg agattctagc ttttccctgc    420
aatcagtttg gtttccaaga gcccggttca aactccgaga tcaacaatt cgcttgccac    480
cggtttaaag cagagttccc tatatttgat aagggtgacg tgaatggacc aagcacagcg    540
ccgatctacg agttcttgaa atcaaacgca ggaggattct tgggtggtct cattaaatgg    600
aacttgaga agttcttgat tgataaaaag gaaagggtcg ttgagaggta cctcccacc    660
acatccctt tccaaatcga gaaagacatc cagaagttgc ttgccgtta a              711

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&lt;210&gt; 2150

&lt;211&gt; 236

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2150

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Met Val Ser Met Thr Thr Ser Ser Ser Tyr Gly Thr Phe Ser Thr
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Val Val Asn Ser Ser Arg Pro Asn Ser Ser Ala Thr Phe Leu Val Pro
          20          25          30

Ser Leu Lys Phe Ser Thr Gly Ile Ser Asn Phe Ala Asn Leu Ser Asn
          35          40          45

Gly Phe Ser Leu Lys Ser Pro Ile Asn Pro Gly Phe Leu Phe Lys Ser
          50          55          60

Arg Pro Phe Thr Val Gln Ala Arg Ala Ala Ala Glu Lys Thr Val His
65          70          75          80

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Asp Phe Thr Val Lys Asp Ile Asp Gly Lys Asp Val Ala Leu Asn Lys  
85 90 95

Phe Lys Gly Lys Val Met Leu Ile Val Asn Val Ala Ser Arg Cys Gly  
100 105 110

Leu Thr Ser Ser Asn Tyr Ser Glu Leu Ser His Leu Tyr Glu Lys Tyr  
115 120 125

Lys Thr Gln Gly Phe Glu Ile Leu Ala Phe Pro Cys Asn Gln Phe Gly  
130 135 140

Phe Gln Glu Pro Gly Ser Asn Ser Glu Ile Lys Gln Phe Ala Cys Thr  
145 150 155 160

Arg Phe Lys Ala Glu Phe Pro Ile Phe Asp Lys Val Asp Val Asn Gly  
165 170 175

Pro Ser Thr Ala Pro Ile Tyr Glu Phe Leu Lys Ser Asn Ala Gly Gly  
180 185 190

Phe Leu Gly Gly Leu Ile Lys Trp Asn Phe Glu Lys Phe Leu Ile Asp  
195 200 205

Lys Lys Gly Lys Val Val Glu Arg Tyr Pro Pro Thr Thr Ser Pro Phe  
210 215 220

Gln Ile Glu Lys Asp Ile Gln Lys Leu Leu Ala Ala  
225 230 235

<210> 2151

<211> 1164

<212> DNA

<213> Arabidopsis thaliana

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tcaatctctc tgttatctct ctttgcattc cctcctcatg aagctaaagc tgctgtttcc	180
attccaagg accaaatcgt ctctctctc actgaagtgg agaaaacaat caaccaagtt	240
caagaaactg gttctagtgt atttgatgca acgcagcgtg tgttccaagt agtaggagat	300
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caacagacgt caaaagcgtg agaagatgct aaaccgattg cttcatcgac catggatacg 540
atttcttcag ctgaccctag tgtcattggt gttgctgctg gtgctgcgtt tcttgcttac 600
cttctctctc ctctgttttt ctctgccatc tcttttaact tccgtgggta caaagggtgat 660
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agatcagaga aagacaagga gaaagccggg attccacggc tcccttcgaa tgctaagaac 780
cgcgatgatc ccattccatt agaagaacta ccaaacaag taaaaggaat cgtgaggaac 840
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agaggatggt tgcagagccg tttaggcact gattcttaca acttctcggt tgcacaagtc 1080
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aagttccttc ctagctccga ctga 1164

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<210> 2152

<211> 387

<212> PRT

<213> Arabidopsis thaliana

<400> 2152

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20 25 30

Ser Val Ser Leu Pro Thr Ser Thr Ser Ile Ser Leu Leu Ser Leu Phe  
35 40 45

Ala Ser Pro Pro His Glu Ala Lys Ala Ala Val Ser Ile Pro Lys Asp  
50 55 60

Gln Ile Val Ser Ser Leu Thr Glu Val Glu Lys Thr Ile Asn Gln Val  
65 70 75 80

Gln Glu Thr Gly Ser Ser Val Phe Asp Ala Thr Gln Arg Val Phe Gln  
85 90 95



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Val Val Gly Asp Ala Leu Lys Pro Ala Leu Asp Thr Ala Leu Pro Ile  
100 105 110

Ala Lys Gln Ala Gly Glu Glu Ala Met Lys Leu Ala Ser Pro Ala Phe  
115 120 125

Ser Glu Ala Ser Lys Lys Ala Gln Glu Ala Met Gln Ser Ser Gly Phe  
130 135 140

Asp Ser Glu Pro Val Phe Asn Ala Ala Lys Thr Val Thr Asp Val Ala  
145 150 155 160

Gln Gln Thr Ser Lys Ala Ile Glu Asp Ala Lys Pro Ile Ala Ser Ser  
165 170 175

Thr Met Asp Thr Ile Ser Ser Ala Asp Pro Ser Val Ile Val Val Ala  
180 185 190

Ala Gly Ala Ala Phe Leu Ala Tyr Leu Leu Leu Pro Pro Val Phe Ser  
195 200 205

Ala Ile Ser Phe Asn Phe Arg Gly Tyr Lys Gly Asp Leu Thr Pro Ala  
210 215 220

Gln Thr Leu Asp Leu Leu Cys Thr Lys Asn Tyr Leu Met Val Asp Ile  
225 230 235 240

Arg Ser Glu Lys Asp Lys Glu Lys Ala Gly Ile Pro Arg Leu Pro Ser  
245 250 255

Asn Ala Lys Asn Arg Val Ile Ser Ile Pro Leu Glu Glu Leu Pro Asn  
260 265 270

Lys Val Lys Gly Ile Val Arg Asn Ser Lys Arg Val Glu Ala Glu Ile  
275 280 285

Ala Ala Leu Lys Ile Ser Tyr Leu Lys Lys Ile Asn Lys Gly Ser Asn  
290 295 300

Ile Ile Ile Leu Asp Ser Tyr Thr Asp Ser Ala Lys Ile Val Ala Lys  
305 310 315 320

Thr Leu Lys Val Leu Gly Tyr Lys Asn Cys Tyr Ile Val Thr Asp Gly  
325 330 335

Phe Ser Gly Gly Arg Gly Trp Leu Gln Ser Arg Leu Gly Thr Asp Ser  
Page 3123

340

Tyr Asn Phe Ser Phe Ala Gln Val Leu Ser Pro Ser Arg Ile Ile Pro  
355 365

Ala Ala Ser Arg Ser Phe Gly Thr Arg Ser Gly Thr Lys Phe Leu Pro  
370 375 380

Ser Ser Asp  
385

&lt;210&gt; 2153

&lt;211&gt; 1227

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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aacgaaaaga ttaatgcgtc taggaggaat ctaggcgtgc tctcatgtgg gaccggaat 180  
ccaattgacg actggtggag atgcgaccgg aaatgggaga aaaaccgaca acggttagcc 240  
gattgcgcga tcgggtttgg caaacacgca atcgggtggtc gtgacggtaa aatctacgtg 300  
gtgactgact cgagtgaaca agacgtggtt aaccttaaac ccggaaccct tagacacgcg 360  
gtgatccaag acgagccact atggatcatc ttcgcgcgtg acatgggtcat aaaactaaaa 420  
gaagagctga ttatgaactc ttcaagact atagacggcc gtggagcgag cgtccacatt 480  
gctggtggcg cgtgtatcac cgccagttac gtgaccaaca tcatcatcca cggtgttaac 540  
atccatgact gtaaaaagaa ggggaatgct tacgttagag actctccgtc gcattatggg 600  
tggaggacag cgtctgacgg tgacgcccgc tcgatttttg gtggctccca cgtgtgggta 660  
gaccattgct cgttggtcca ctgcgctgac ggtctgatag acgccattca tggatcaacg 720  
gccattacta tctctaataa ctatttgagt caccacaata aagtcattgt tttgggacac 780  
agtgattcgt acacgagaga caagaacatg caagtcacca ttgcctttaa tcactttgga 840  
gaaggtcttg ttcagagaat gccaaagtgt agacatggat attttcatgt ggtgaataat 900  
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caaggcaata ggtttcttgc tccaacgac catgtcttta aagaggtgac taaatcagaa 1020  
gatgcaccac gaagcaaatg gaagaaatgg aattggagat cgggaaggtga tttgttccta 1080  
aacggtgcgt tttttacgcc ttcgggtgga ggagcctctt caagctatgc taaggcttcg 1140  
Page 3124

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agtttgtcgg ctagaccgtc ctcatgtgtg gcttcagtca cgtccaatgc tgggtgactc 1200  
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<210> 2154

<211> 408

<212> PRT

<213> Arabidopsis thaliana

<400> 2154

Met Arg Met Thr Leu Val His Leu Ser Leu Ser Leu Phe Ser Cys Leu  
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 20 25 30

Pro Glu Leu Val Val Gln Glu Val Asn Glu Lys Ile Asn Ala Ser Arg  
 35 40 45

Arg Asn Leu Gly Val Leu Ser Cys Gly Thr Gly Asn Pro Ile Asp Asp  
 50 55 60

Cys Trp Arg Cys Asp Pro Lys Trp Glu Lys Asn Arg Gln Arg Leu Ala  
 65 70 75 80

Asp Cys Ala Ile Gly Phe Gly Lys His Ala Ile Gly Gly Arg Asp Gly  
 85 90 95

Lys Ile Tyr Val Val Thr Asp Ser Ser Asp Lys Asp Val Val Asn Pro  
 100 105 110

Lys Pro Gly Thr Leu Arg His Ala Val Ile Gln Asp Glu Pro Leu Trp  
 115 120 125

Ile Ile Phe Ala Arg Asp Met Val Ile Lys Leu Lys Glu Glu Leu Ile  
 130 135 140

Met Asn Ser Phe Lys Thr Ile Asp Gly Arg Gly Ala Ser Val His Ile  
 145 150 155 160

Ala Gly Gly Ala Cys Ile Thr Val Gln Tyr Val Thr Asn Ile Ile Ile  
 165 170 175

His Gly Val Asn Ile His Asp Cys Lys Arg Lys Gly Asn Ala Tyr Val  
 Page 3125

Arg Asp Ser Pro Ser His Tyr Gly Trp Arg Thr Ala Ser Asp Gly Asp  
 195 200 205  
 Ala Val Ser Ile Phe Gly Gly Ser His Val Trp Val Asp His Cys Ser  
 210 215  
 Leu Ser Asn Cys Ala Asp Gly Leu Ile Asp Ala Ile His Gly Ser Thr  
 225 230 235  
 Ala Ile Thr Ile Ser Asn Asn Tyr Leu Ser His His Asn Lys Val Met  
 245 250 255  
 Leu Leu Gly His Ser Asp Ser Tyr Thr Arg Asp Lys Asn Met Gln Val  
 260 265 270  
 Thr Ile Ala Phe Asn His Phe Gly Glu Gly Leu Val Gln Arg Met Pro  
 275 280 285  
 Arg Cys Arg His Gly Tyr Phe His Val Val Asn Asn Asp Tyr Thr His  
 290 295 300  
 Trp Gln Met Tyr Ala Ile Gly Gly Ser Ala Ala Pro Thr Ile Asn Ser  
 305 310 315  
 Gln Gly Asn Arg Phe Leu Ala Pro Asn Asp His Val Phe Lys Glu Val  
 325 330 335  
 Thr Lys Tyr Glu Asp Ala Pro Arg Ser Lys Trp Lys Lys Trp Asn Trp  
 340 345 350  
 Arg Ser Glu Gly Asp Leu Phe Leu Asn Gly Ala Phe Phe Thr Pro Ser  
 355 360 365  
 Gly Gly Gly Ala Ser Ser Ser Tyr Ala Lys Ala Ser Ser Leu Ser Ala  
 370 375 380  
 Arg Pro Ser Ser Leu Val Ala Ser Val Thr Ser Asn Ala Gly Ala Leu  
 385 390 395 400  
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 405

&lt;210&gt; 2155

&lt;211&gt; 948

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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acccgctctg tttcttctct ttcttcttct catcgctccc ccagagggtg tgttgccatg      180
gctggatccg gaaagttttt cgttgaggga aactggaagt gtaacgggac taaggactcc      240
atcgccaagc ttatctccga tctcaacagt gcaaccttgg aagcagatgt agatgttgtt      300
gtgtcacctc catttgtcta catcgaccag gtcaaatcct cgttgacaga ccgtattgac      360
atatcagggtc agaactcttg ggttgggaaa ggtggaggct tcaactgtga aatcagcgtg      420
gaacagctca aagaccttgg ctgcaagtgg gtcattcttg ggcattccga acggagacat      480
gtcatcggag aaaaagatga gtttatcggg aagaaagctg catatgcatt gagtgagggt      540
cttgagtgta tagcttgatg tggggaaaag ctagaagaga ggaagcagg caagacgttt      600
gatgtttgct tcgcgcaact gaaggcggtt gctgatgctg tgcctagctg ggacaatata      660
gttgttgcat acgagcctgt atgggcaatt ggaactggta aagttgcatc tcctcagcaa      720
gcacaagaag tccatgtagc tgtccgcggt tggctaaaga agaatgtctc tgaggaagtt      780
gcttccaaaa cgagaatcat atatggaggt tctgtcaatg gaggcaacag tgcagagctt      840
gccaaagaag aagacattga tggatttctt gttggtggtg cctccttgaa gggctctgag      900
tttgcaacca ttgtgaactc agtcacgctg aagaaagttg ctgcttga      948

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&lt;210&gt; 2156

&lt;211&gt; 315

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2156

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Met Ala Ala Thr Ser Leu Thr Ala Pro Pro Ser Phe Ser Gly Leu Arg
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Arg Ile Ser Pro Lys Leu Asp Ala Ala Ala Val Ser Ser His Gln Ser
20     25     30
Phe Phe His Arg Val Asn Ser Ser Thr Arg Leu Val Ser Ser Ser Ser
35     40     45

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Ser Ser His Arg Ser Pro Arg Gly Val Val Ala Met Ala Gly Ser Gly  
50 55

Lys Phe Phe Val Gly Gly Asn Trp Lys Cys Asn Gly Thr Lys Asp Ser  
65 70 75 80

Ile Ala Lys Leu Ile Ser Asp Leu Asn Ser Ala Thr Leu Glu Ala Asp  
85 90 95

Val Asp Val Val Ser Pro Pro Phe Val Tyr Ile Asp Gln Val Lys  
100 105 110

Ser Ser Leu Thr Asp Arg Ile Asp Ile Ser Gly Gln Asn Ser Trp Val  
115 120 125

Gly Lys Gly Gly Ala Phe Thr Gly Glu Ile Ser Val Glu Gln Leu Lys  
130 135 140

Asp Leu Gly Cys Lys Trp Val Ile Leu Gly His Ser Glu Arg Arg His  
145 150 155 160

Val Ile Gly Glu Lys Asp Glu Phe Ile Gly Lys Lys Ala Ala Tyr Ala  
165 170 175

Leu Ser Glu Gly Leu Gly Val Ile Ala Cys Ile Gly Glu Lys Leu Glu  
180 185 190

Glu Arg Glu Ala Gly Lys Thr Phe Asp Val Cys Phe Ala Gln Leu Lys  
195 200 205

Ala Phe Ala Asp Ala Val Pro Ser Trp Asp Asn Ile Val Val Ala Tyr  
210 215 220

Glu Pro Val Trp Ala Ile Gly Thr Gly Lys Val Ala Ser Pro Gln Gln  
225 230 235 240

Ala Gln Glu Val His Val Ala Val Arg Gly Trp Leu Lys Lys Asn Val  
245 250 255

Ser Glu Glu Val Ala Ser Lys Thr Arg Ile Ile Tyr Gly Gly Ser Val  
260 265 270

Asn Gly Gly Asn Ser Ala Glu Leu Ala Lys Glu Glu Asp Ile Asp Gly  
275 280 285

Phe Leu Val Gly Gly Ala Ser Leu Lys Gly Pro Glu Phe Ala Thr Ile  
290 295 300

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Val Asn Ser Val Thr Ser Lys Lys Val Ala Ala  
305 310 315

<210> 2157

<211> 906

<212> DNA

<213> Arabidopsis thaliana

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<400> 2157
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agaattccag cttctttcag aagaaaagct acaaaacttg aagtgatggc ttcaggaaag   180
acacctggac tgactcagga agctaattgg gttgcaattg atagacaaaa caaactgat   240
gtatttgacg acatgaaaca gcggttcctg gccttcaaga agcttaagta catggatgac   300
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gcagactcta gagtttgctc ttctgtgtc ctgggattcc aaccgggtga cgcattcact   420
gttcgtaaca ttgcaaat tttacctcca tatgagtctg gacctactga aaccaaagct   480
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cgggtgtggg gaattcaagc tttaatgaaa atggaagacg aaggagattc cagaagttc   600
atacacaact gggtagttgt gggaaagaag gcaaaggaaa gcacaaaagc tgttgcttca   660
aacctccatt ttgatcatca gtgccaacat tgtgaaaagg catcgataaa tcattcatta   720
gaaaggctgc ttgggtaccg gtggatagaa gagaaggatg ggcaagggtc actgtctctc   780
catgggtgat actataattt tgttgattgt acgttcgaga aatggacagt ggattatgca   840
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<210> 2158

<211> 301

<212> PRT

<213> Arabidopsis thaliana

<400> 2158

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Page 3129

1 5 15  
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20 25 30  
His Ser Leu Lys Thr Thr Gln Leu Arg Ile Pro Ala Ser Phe Arg Arg  
35 40 45  
Lys Ala Thr Asn Leu Gln Val Met Ala Ser Gly Lys Thr Pro Gly Leu  
50 55 60  
Thr Gln Glu Ala Asn Gly Val Ala Ile Asp Arg Gln Asn Asn Thr Asp  
65 70 75 80  
Val Phe Asp Asp Met Lys Gln Arg Phe Leu Ala Phe Lys Lys Leu Lys  
85 90 95  
Tyr Met Asp Asp Phe Glu His Tyr Lys Asn Leu Ala Asp Ala Gln Ala  
100 105 110  
Pro Lys Phe Leu Val Ile Ala Cys Ala Asp Ser Arg Val Cys Pro Ser  
115 120 125  
Ala Val Leu Gly Phe Gln Pro Gly Asp Ala Phe Thr Val Arg Asn Ile  
130 135 140  
Ala Asn Leu Val Pro Pro Tyr Glu Ser Gly Pro Thr Glu Thr Lys Ala  
145 150 155 160  
Ala Leu Glu Phe Ser Val Asn Thr Leu Asn Val Glu Asn Ile Leu Val  
165 170 175  
Ile Gly His Ser Arg Cys Gly Gly Ile Gln Ala Leu Met Lys Met Glu  
180 185 190  
Asp Glu Gly Asp Ser Arg Ser Phe Ile His Asn Trp Val Val Val Gly  
195 200 205  
Lys Lys Ala Lys Glu Ser Thr Lys Ala Val Ala Ser Asn Leu His Phe  
210 215 220  
Asp His Gln Cys Gln His Cys Glu Lys Ala Ser Ile Asn His Ser Leu  
225 230 235 240  
Glu Arg Leu Leu Gly Tyr Pro Trp Ile Glu Glu Lys Val Arg Gln Gly  
245 250 255



Ser Leu Ser Leu His Gly Gly Tyr Tyr Asn Phe Val Asp Cys Thr Phe  
 260 265 270

Glu Lys Trp Thr Val Asp Tyr Ala Ala Ser Arg Gly Lys Lys Lys Glu  
 275 280 285

Gly Ser Gly Ile Ala Val Lys Asp Arg Ser Val Trp Ser  
 290 295 300

<210> 2159

<211> 1446

<212> DNA

<213> *Arabidopsis thaliana*

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 actcgatgca accgatcggc ctttgttgat ggcatacaac acacattgat caatgtctcc 180  
 agattctcca gtaaaatgga gataaattat aagaaaaaag gagaaccggt ctggattcct 240  
 gttaaacctc gagtagatga tcatattatt gtgccggatc ttgaatatcc caacattcaa 300  
 aatcctgatac agttcgtaga agactatact tcaaacatag ctaatatcc aatggacatg 360  
 tccaaacctc tttgggaatt tcatttactc aacatgaaga catcaaaagc agaatctttg 420  
 gctatagtaa aaatacatca ctccattggt gatgggagt ctcttatgct cctactactt 480  
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 accaaaaacc ctcttatggg taaccggagt gatggatttc aatcttgga ggtgtgccat 720  
 cggaataata gttttgagga tgcaagtta ataaaggaca caatgaacat gaagtggaat 780  
 gatgttcttc ttggaatgac acaagcaggt ctttcaagat atttgagtag caaatatgat 840  
 ggatcaacgg ctgagaagaa aaagatctta gaaaaactcc gtgttcgtgg tgccgtagct 900  
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atcaatctag ctgttgacac aacaacgatt caagatccta atcgactatg tgatgatatg 1380  
gtggaagcac ttgagatcat caaatctgcc acacaagggg aaatatattca caaacggaa 1440  
gtttga 1446

&lt;210&gt; 2160

&lt;211&gt; 481

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2160

Met Lys Ala Glu Lys Val Met Glu Arg Glu Ile Glu Thr Thr Pro Ile  
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Glu Pro Leu Ser Pro Met Ser His Met Leu Ser Ser Pro Asn Phe Phe  
20 25 30  
Ile Val Ile Thr Phe Gly Phe Lys Thr Arg Cys Asn Arg Ser Ala Phe  
35 40 45  
Val Asp Gly Ile Asn Asn Thr Leu Ile Asn Ala Pro Arg Phe Ser Ser  
50 55 60  
Lys Met Glu Ile Asn Tyr Lys Lys Lys Gly Glu Pro Val Trp Ile Pro  
65 70 75 80  
Val Lys Leu Arg Val Asp Asp His Ile Ile Val Pro Asp Leu Glu Tyr  
85 90 95  
Ser Asn Ile Gln Asn Pro Asp Gln Phe Val Glu Asp Tyr Thr Ser Asn  
100 105 110  
Ile Ala Asn Ile Pro Met Asp Met Ser Lys Pro Leu Trp Glu Phe His  
115 120 125  
Leu Leu Asn Met Lys Thr Ser Lys Ala Glu Ser Leu Ala Ile Val Lys  
130 135 140  
Ile His His Ser Ile Gly Asp Gly Met Ser Leu Met Ser Leu Leu Leu  
145 150 155 160

Ala Cys Ser Arg Lys Ile Ser Asp Pro Asp Ala Leu Val Ser Asn Thr  
 165 170 175  
 Thr Ala Thr Lys Lys Pro Ala Asp Ser Met Ala Trp Trp Leu Phe Val  
 180 185 190  
 Gly Phe Trp Phe Met Ile Arg Val Thr Phe Thr Thr Ile Val Glu Phe  
 195 200 205  
 Ser Lys Leu Met Leu Thr Val Cys Phe Leu Glu Asp Thr Lys Asn Pro  
 210 215 220  
 Leu Met Gly Asn Pro Ser Asp Gly Phe Gln Ser Trp Lys Val Val His  
 225 230 235 240  
 Arg Ile Ile Ser Phe Glu Asp Val Lys Leu Ile Lys Asp Thr Met Asn  
 245 250 255  
 Met Lys Val Asn Asp Val Leu Leu Gly Met Thr Gln Ala Gly Leu Ser  
 260 265 270  
 Arg Tyr Leu Ser Ser Lys Tyr Asp Gly Ser Thr Ala Glu Lys Lys Lys  
 275 280 285  
 Ile Leu Glu Lys Leu Arg Val Arg Gly Ala Val Ala Ile Asn Leu Arg  
 290 295 300  
 Pro Ala Thr Lys Ile Glu Asp Leu Ala Asp Met Met Ala Lys Gly Ser  
 305 310 315 320  
 Lys Cys Arg Trp Gly Asn Phe Ile Gly Thr Val Ile Phe Pro Leu Trp  
 325 330 335  
 Val Lys Ser Glu Lys Asp Pro Leu Glu Tyr Ile Arg Arg Ala Lys Ala  
 340 345 350  
 Thr Met Asp Arg Lys Lys Ile Ser Leu Glu Ala Phe Phe Tyr Gly  
 355 360 365  
 Ile Ile Lys Phe Thr Leu Lys Phe Phe Gly Gly Lys Ala Val Glu Ala  
 370 375 380  
 Phe Gly Lys Arg Ile Phe Gly His Thr Ser Leu Ala Phe Ser Asn Val  
 385 390 395 400  
 Lys Gly Pro Asp Glu Glu Ile Ser Phe Phe His His Pro Ile Ser Tyr  
 405 410 415

047-E2F-PCT.ST25.txt

Ile Ala Gly Ser Ala Leu Val Gly Ala Gln Ala Leu Asn Ile His Phe  
420 425 430

Ile Ser Tyr Val Asp Lys Ile Val Ile Asn Leu Ala Val Asp Thr Thr  
435 440 445

Thr Ile Gln Asp Pro Asn Arg Leu Cys Asp Asp Met Val Glu Ala Leu  
450 455 460

Glu Ile Ile Lys Ser Ala Thr Gln Gly Glu Ile Phe His Lys Thr Glu  
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Val

<210> 2161

<211> 921

<212> DNA

<213> Arabidopsis thaliana

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tcctctcctc tggttatgtcc ccaatgccgt gtcgatttcc tcgaacgtat ggatcacgat 180  
tcttcttctt ctaatctctt tgacgttacc atcggtgatt ttgaagaaca agacggagaa 240  
aacgatgatg aagacgacga agaagattgg tgtttcgttg atccagctgt taattccgat 300  
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gatatcgatt cgatcccccac gattcagatc tcgtcttctt tgctctgttc caccgatgat 480  
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tcgtgctcga gattaccgtg tagtcatata taccactccg attgcatcgt cccttggctc 600  
tcggatcata actcgtgtcc gctttgtaga ttgagctcc ctacgacggc gaaggtggga 660  
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gatggtgatg atgtggaaga tgattggctt ggaatcagaa acgctgtgag aagactggct 780  
cgctgcatg agcagatgag attgggagtg ggagagatgg agaggaattt ggctaggact 840  
gtttcaggtc ttggaattgg tatgagaaga agagaagaga ttgaagcaga cagaagcaac 900  
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&lt;210&gt; 2162

&lt;211&gt; 306

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2162

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Arg Arg Thr Tyr Trp Cys His Glu Cys Asp Met Ser Leu Ser Leu Leu  
20 25 30

Ser Ser Ser Asp Ser Asp Ser Asp Ser Ser Pro Leu Leu Cys Pro Gln  
35 40 45

Cys Arg Val Asp Phe Leu Glu Arg Met Asp His Asp Ser Ser Ser Ser  
50 55 60

Asn Leu Phe Asp Val Thr Ile Gly Asp Phe Glu Glu Gln Asp Gly Glu  
65 70 75 80

Asn Asp Asp Glu Asp Asp Glu Glu Asp Trp Cys Phe Val Asp Pro Ala  
85 90 95

Val Asn Ser Asp Asp Asn Phe Leu Leu Asp Ser Pro Tyr Leu His Arg  
100 105 110

Leu Leu Arg His Leu Ala Ser Asp Asn Ser Gly Ser Ser Ser Ser  
115 120 125

Ser Ser Ser Ser Ser Ser Leu Leu Lys Ser Ser Asp Ile Asp Ser  
130 135 140

Ile Pro Thr Ile Gln Ile Ser Ser Ser Leu Leu Cys Ser Thr Asp Asp  
145 150 155 160

Ser Asp Pro Asp Ser Val Leu Leu Cys Ala Val Cys Lys Glu Asp Phe  
165 170 175

Ile Ile Gly Glu Ser Ala Arg Arg Leu Pro Cys Ser His Ile Tyr His  
180 185 190

Ser Asp Cys Ile Val Pro Trp Leu Ser Asp His Asn Ser Cys Pro Leu  
3135

195 200 047-E2F-PCT.ST25.txt 205

Cys Arg Phe Glu Leu Pro Thr Thr Ala Lys Val Gly Ile Gly Gly Ser  
210 215

Glu Ala Glu Met Arg Ile Arg Leu Ser Asp Leu Ala Thr Ile Ala Ala  
225 230 235 240

Asp Gly Asp Asp Val Glu Asp Asp Trp Leu Gly Ile Arg Asn Ala Leu  
245 250 255

Arg Arg Leu Ala Arg Arg His Glu Gln Met Arg Leu Gly Val Gly Glu  
260 265 270

Met Glu Arg Asn Leu Ala Arg Thr Val Ser Gly Leu Gly Ile Gly Met  
275 280 285

Arg Arg Arg Glu Glu Ile Glu Ala Asp Arg Ser Asn Val Thr Thr Thr  
290 295 300

Pro Leu  
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<210> 2163

<211> 306

<212> DNA

<213> Arabidopsis thaliana

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atgcaccatc taactgtgga ggtggctgat ggtgagacca ataagggtcta tgaggccaag 240  
gttttgaga aagcttgga gaatctcaag cagttggaga gtttcaacca ctttcacgat 300  
gtttaa 306

<210> 2164

<211> 101

<212> PRT

<213> Arabidopsis thaliana

&lt;400&gt; 2164

Met Ala Asp Gln Gln Ala Gly Thr Ile Val Gly Gly Val Arg Asp Ile  
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Asp Ala Asn Ala Asn Asp Leu Gln Val Glu Ser Leu Ala Arg Phe Ala  
 20 25 30

Val Asp Glu His Asn Lys Asn Glu Asn Leu Thr Leu Glu Tyr Lys Arg  
 35 40 45

Leu Leu Gly Ala Lys Thr Gln Val Val Ala Gly Thr Met His His Leu  
 50 55 60

Thr Val Glu Val Ala Asp Gly Glu Thr Asn Lys Val Tyr Glu Ala Lys  
 65 70 75 80

Val Leu Glu Lys Ala Trp Glu Asn Leu Lys Gln Leu Glu Ser Phe Asn  
 85 90 95

His Leu His Asp Val  
 100

&lt;210&gt; 2165

&lt;211&gt; 399

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2165

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gacaatgttc tcctcgccgt caccgggaaa gacgcgtcga tcgatttcga agatgtgaac	180
catagcaaag atgccaagga gctaatagaag aaatactgta tcggtgacgt tgaccagtca	240
acgggtccgg tgacgcaaca gtatattccg ccgtgggaga aggaatctac ggcgcgggaa	300
acaactaaaag aagaatctgg aaagaagctg cttatctact taattcctct cttgatactc	360
ggcgttgctt tcgctctcag attctacaac aacaagtag	399

&lt;210&gt; 2166

&lt;211&gt; 132

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2166

Met Ala Asn Leu Ile Ser Phe His Asp Val Ala Lys His Lys Cys Lys  
1 5 10 15Asn Asp Cys Trp Ile Leu Ile His Gly Lys Val Tyr Asp Ile Ser Thr  
20 25 30Phe Met Asp Glu His Pro Gly Gly Asp Asn Val Leu Leu Ala Val Thr  
35 40 45Gly Lys Asp Ala Ser Ile Asp Phe Glu Asp Val Asn His Ser Lys Asp  
50 55 60Ala Lys Glu Leu Met Lys Lys Tyr Cys Ile Gly Asp Val Asp Gln Ser  
65 70 75 80Thr Val Pro Val Thr Gln Gln Tyr Ile Pro Pro Trp Glu Lys Glu Ser  
85 90 95Thr Ala Ala Glu Thr Thr Lys Glu Glu Ser Gly Lys Lys Leu Leu Ile  
100 105 110Tyr Leu Ile Pro Leu Leu Ile Leu Gly Val Ala Phe Ala Leu Arg Phe  
115 120 125Tyr Asn Asn Lys  
130

&lt;210&gt; 2167

&lt;211&gt; 978

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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gtcatttctc tccttaaccg tactgggtcac gtcgggttca gacgcggacc ggttcaactc	240
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gctccgatag tgagaacaac tacgaatcac cctcaaatcg ttctccacc gtctagtgtgta 360
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aaacacgtgg aacgagcatt agatgatcca gcgatgctta ttgtgacata cgaaggagag 900
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<210> 2168

<211> 325

<212> PRT

<213> Arabidopsis thaliana

<400> 2168

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20 25 30

Arg Val Leu Ser Asn Arg Pro Glu Gln Gln His Asn Val Asp Cys Ser  
35 40 45

Glu Ile Thr Asp Phe Thr Val Ser Lys Phe Lys Thr Val Ile Ser Leu  
50 55 60

Leu Asn Arg Thr Gly His Ala Arg Phe Arg Arg Gly Pro Val His Ser  
65 70 75 80

Thr Ser Ser Ala Ala Ser Gln Lys Leu Gln Ser Gln Ile Val Lys Asn  
85 90 95

Thr Gln Pro Glu Ala Pro Ile Val Arg Thr Thr Thr Asn His Pro Gln  
Page 3139

Ile Val Pro Pro Pro Ser Ser Val Thr Leu Asp Phe Ser Lys Pro Ser  
115 120 125

Ile Phe Gly Thr Lys Ala Lys Ser Ala Glu Leu Glu Phe Ser Lys Glu  
130 135 140

Asn Phe Ser Val Ser Leu Asn Ser Ser Phe Met Ser Ser Ala Ile Thr  
145 150 155 160

Gly Asp Gly Ser Val Ser Asn Gly Lys Ile Phe Leu Ala Ser Ala Pro  
165 170 175

Leu Gln Pro Val Asn Ser Ser Gly Lys Pro Pro Leu Ala Gly His Pro  
180 185 190

Tyr Arg Lys Arg Cys Leu Glu His Glu His Ser Glu Ser Phe Ser Gly  
195 200 205

Lys Val Ser Gly Ser Ala Tyr Gly Lys Cys His Cys Lys Lys Ser Arg  
210 215 220

Lys Asn Arg Met Lys Arg Thr Val Arg Val Pro Ala Ile Ser Ala Lys  
225 230 235 240

Ile Ala Asp Ile Pro Pro Asp Glu Tyr Ser Trp Arg Lys Tyr Gly Gln  
245 250 255

Lys Pro Ile Lys Gly Ser Pro His Pro Arg Gly Tyr Tyr Lys Cys Ser  
260 265 270

Thr Phe Arg Gly Cys Pro Ala Arg Lys His Val Glu Arg Ala Leu Asp  
275 280 285

Asp Pro Ala Met Leu Ile Val Thr Tyr Glu Gly Glu His Arg His Asn  
290 295 300

Gln Ser Ala Met Gln Glu Asn Ile Ser Ser Ser Gly Ile Asn Asp Leu  
305 310 315 320

Val Phe Ala Ser Ala  
325

<210> 2169

<211> 1263

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2169

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ccaaatccaa cgaagattcc acagtttagcg gcgactatcc aagccgtaga tctagcaciaa    180
tggagaaatc gtgtgattaa agacaacaaa gcgcttaaga taatgcaatc ttctctccca     240
gattcgggtt tcaggaagac tatctcgatt gcttcagcca aggaactttg ggatttgctc     300
aaaaaaggta acgataccaa agaagctaag ctacgtagat tagagaaaca atttgagaag     360
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gaacggttcg aagttttggg aaatccgata tcggatgata aggttatcac caagctgtta     480
acttcgtgtg catggccata tgatgattct attcctgtgt tgaagggaatt catgactttg     540
cctgatctga ctcttcgcga tcttcttaag gcttttgaat tgtttggatc acatcctgaa     600
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cataggccta gggtagtgaa tttaagtggg gccaatcaat ttagaggaca agggcattat     780
gcaagagatt gcagcaacac tagaaatctg caacaagctg agaagaggat ccaaaaacct     840
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gtacacacca ctacaacgga tcacatgact ccatatgaga agtttttcac gacttttagac     960
cgatcatata gagctagggt tggactggcg gacggggaag ttgtcatggc agaagggaaa    1020
ggagatgtca tgattatgac gaggggaaggg aagaagagga tcaagaatgt gctttttgtt    1080
cccgggatca acaaaaacgc tttgagtgtt gctcagatga cagaccaagg ctgttcagta    1140
acatttggag gaggcaaatg cattatgaag aatcacactg ggaaagtatt tggagaagcc    1200
atgttggaag agacagggtt tgttattcgt ttgcagggtg ttaaagaagt tatctggcac    1260
tag

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&lt;210&gt; 2170

&lt;211&gt; 420

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2170

047-E2F-PCT.ST25.txt

Met Ala Ala Asn Leu Gln Asp Gly Val Ser Asp Asp Phe Asp Tyr Glu  
1 5 10

His Trp Ser Pro Ile Ala Lys Lys Arg Leu Val Glu Asn Gly Val Trp  
20 25

Asp Val Val Gln Asn Gly Val Ser Pro Asn Pro Thr Lys Ile Pro Gln  
35 40 45

Leu Ala Ala Thr Ile Gln Ala Val Asp Leu Ala Gln Trp Arg Asn Arg  
50 55 60

Val Ile Lys Asp Asn Lys Ala Leu Lys Ile Met Gln Ser Ser Leu Pro  
65 70 75 80

Asp Ser Val Phe Arg Lys Thr Ile Ser Ile Ala Ser Ala Lys Glu Leu  
85 90 95

Trp Asp Leu Leu Lys Lys Gly Asn Asp Thr Lys Glu Ala Lys Leu Arg  
100 105 110

Arg Leu Glu Lys Gln Phe Glu Lys Leu Met Met Tyr Glu Gly Glu Pro  
115 120 125

Met Asp Leu Tyr Leu Lys Arg Val Glu Glu Ile Thr Glu Arg Phe Glu  
130 135 140

Val Leu Gly Asn Pro Ile Ser Asp Asp Lys Val Ile Thr Lys Leu Leu  
145 150 155 160

Thr Ser Leu Ser Trp Pro Tyr Asp Asp Ser Ile Pro Val Leu Lys Glu  
165 170 175

Phe Met Thr Leu Pro Asp Leu Thr Leu Arg Asp Leu Leu Lys Ala Phe  
180 185 190

Glu Leu Phe Gly Ser His Pro Glu Thr Met Pro Gln Glu Leu Met Lys  
195 200 205

Phe Ile Asn Ile Leu Arg Lys Ala His Ser Glu Arg Met Pro Cys Gly  
210 215 220

Ile Cys Val Lys Asn Asn His Asn Gln Glu Glu Asp Leu Tyr Tyr Asn  
225 230 235 240

His Arg Pro Arg Val Val Asn Leu Ser Gly Ala Asn Gln Phe Arg Gly  
245 250 255

047-E2F-PCT.ST25.txt

Gln Gly His Tyr Ala Arg Asp Cys Ser Asn Thr Arg Asn Leu Gln Gln  
260 265 270

Ala Glu Lys Arg Ile Gln Lys Pro Glu His Leu Met Leu Gly Val Thr  
275 280 285

Val Gly Gly Ile Thr Phe Asp Glu Gly Met Trp Met Val His Thr Thr  
290 295 300

Thr Thr Asp His Met Thr Pro Tyr Glu Lys Phe Phe Thr Thr Leu Asp  
305 310 315 320

Arg Ser Tyr Arg Ala Arg Val Gly Leu Ala Asp Gly Lys Val Val Met  
325 330 335

Ala Glu Gly Lys Gly Asp Val Met Ile Met Thr Arg Glu Gly Lys Lys  
340 345 350

Arg Ile Lys Asn Val Leu Phe Val Pro Gly Ile Asn Lys Asn Ala Leu  
355 360 365

Ser Val Ala Gln Met Thr Asp Gln Gly Cys Ser Val Thr Phe Gly Gly  
370 375 380

Gly Lys Cys Ile Met Lys Asn His Thr Gly Lys Val Phe Gly Glu Ala  
385 390 395 400

Met Leu Glu Glu Thr Gly Tyr Val Ile Arg Leu Gln Val Ile Lys Glu  
405 410 415

Val Ile Trp His  
420

<210> 2171

<211> 663

<212> DNA

<213> Arabidopsis thaliana

<400> 2171	
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aagcgatcca attctctcac gcttcgttgt tcaacaaatg gcgatagcac ctcaaccgaa	180

aaggaacac caatcgaact caaatccca gcatttccaa cggtaatgga cattaaccaa 240  
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gctgggtattg ataaagttag atttcgaaa ccagtgttg caggagacac gctagtcatg 540  
aggatgactc ttctcaagtt ccagaagcgg ttcgggctcg ctaaaatgga aggtaaagct 600  
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<210> 2172

<211> 220

<212> PRT

<213> Arabidopsis thaliana

<400> 2172

Met Ala Thr Thr Ser Asn Ser Val Leu Phe Leu Ser Ser Asp Ser Leu  
1 5 10 15

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20 25 30

His Ser Val Ser Leu Pro Pro Asn Lys Arg Ser Asn Ser Leu Thr Leu  
35 40 45

Arg Cys Ser Thr Asn Gly Asp Ser Thr Ser Thr Glu Lys Glu Thr Pro  
50 55 60

Ile Glu Leu Lys Phe Pro Ala Phe Pro Thr Val Met Asp Ile Asn Gln  
65 70 75 80

Ile Arg Glu Ile Leu Pro His Arg Phe Pro Phe Leu Leu Val Asp Arg  
85 90 95

Val Ile Glu Tyr Thr Pro Gly Val Ser Ala Val Ala Ile Lys Asn Val  
100 105 110

Thr Ile Asn Asp Asn Phe Phe Pro Gly His Phe Pro Glu Arg Pro Ile  
115 120 125

Met Pro Gly Val Leu Met Ile Glu Ala Met Ala Gln Val Gly Gly Ile  
 130 135 140

Val Met Leu Gln Pro Glu Val Gly Gly Ser Gln Asp Asn Phe Phe Phe  
 145 150 155 160

Ala Gly Ile Asp Lys Val Arg Phe Arg Lys Pro Val Ile Ala Gly Asp  
 165 170 175

Thr Leu Val Met Arg Met Thr Leu Leu Lys Phe Gln Lys Arg Phe Gly  
 180 185 190

Leu Ala Lys Met Glu Gly Lys Ala Tyr Val Gly Gly Ala Leu Val Cys  
 195 200 205

Glu Gly Glu Phe Met Met Val Ser Ala Gly Ser Ser  
 210 215 220

<210> 2173

<211> 1692

<212> DNA

<213> Arabidopsis thaliana

<400> 2173

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ccaattcctc gatttccac acgaatcgcc gccgcaccgc aagacaacgc tctctctctt	240
cttcccccat ctccgtctcc gtctccgtct cctcaaggag cgaaactcat cctctgatt	300
cttcaatct ccgtcggcct aatcctccga ttcgctgttc ctgtaccaga aggagtcaca	360
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ctttctttct ccgccgcttt ctacgtttc acaagcgagg ttatctggtt gatcgttatc	540
tctttcttct tcgctcgttg attcgtcaaa acaggtcttg gtgtagaat cgctacttac	600
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atcatcaagt ctctatcgct ctggctgga agtaaacga atgattcttc ttcaggagaa	780
ctaggctctt acttgattca atctcaattc cagtgcgcgc gaaactctag tgcgcttttc	840

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atctcaaacc cgtgggtttc ttggtttaag gctgctagtc tacctgcaat catatcactt      960
ctttgtactc cacttatcct ctataagctt taccctccag aaacaaagga cacacctgag    1020
gtccaggta ttgctgcaac gaaactcaag caaatgggcc ctgtcactaa aaacgaatgg    1080
atcatggtcg gtacaatgct tcttgctgtc actctttgga tctgcggaga gactctggga    1140
ataccaagtg ttgtagctgc catgatcggt ctctccatac ttcttgctgt aggtgtccctt    1200
aattgggacg attgcctaag cgaaaaatcg gcatgggaca cattagcttg gtttgctgtc    1260
ttggtgggaa tggcaggaca gcttacaac ctcggtgttg taactgggat gtctgattgt    1320
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gctgtctact atggagcggg ttatgttgat ctgcctgat tattcaagat tggattcgtg    1620
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ggctcttact aa                                         1692

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&lt;210&gt; 2174

&lt;211&gt; 563

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2174

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Met Glu Ser Phe Ala Leu His Ser Leu Ser Thr Thr Ala Thr Ser Thr
1           5           10           15

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```

Leu Leu Ser His His His His His His Pro Ser Arg Leu Ser Leu Leu
20           25           30

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Arg Arg Thr Ser Ser Arg Ser Pro Pro Ser Thr Ile Ser Leu Arg Ser
35           40           45

```

```

Leu Ser Val Gln Pro Leu Ser Phe Pro Leu Leu Lys Pro Ile Pro Arg
50           55           60

```

```

Phe Ser Thr Arg Ile Ala Ala Ala Pro Gln Asp Asn Ala Pro Pro Pro
65           70           75           80

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Pro 85	Pro	Pro	Ser	Pro 85	Ser	Pro	Ser	Pro 90	Ser	Pro 90	Gln	Ala	Lys 95	Leu
Ile	Pro	Leu	Ile 100	Leu	Ser	Ile	Ser	Val 105	Gly	Leu	Ile	Leu	Arg 110	Phe
Val	Pro	Val	Pro	Glu	Gly	Val	Thr 120	Pro	Gln	Gly	Trp	Gln 125	Leu	Leu
Ile	Phe 130	Leu	Ser	Thr	Ile	Ala 135	Gly	Leu	Val	Leu	Ser 140	Pro	Leu	Pro
Gly 145	Ala	Trp	Ala	Phe	Ile 150	Gly	Leu	Thr	Ala	Ser 155	Ile	Val	Thr	Lys
Leu	Ser	Phe	Ser	Ala 165	Ala	Phe	Ser	Ala	Phe 170	Thr	Ser	Glu	Val	Ile
Leu	Ile	Val	Ile 180	Ser	Phe	Phe	Phe	Ala 185	Arg	Gly	Phe	Val	Lys 190	Thr
Leu	Gly	Asp 195	Arg	Ile	Ala	Thr	Tyr 200	Phe	Val	Lys	Trp	Leu 205	Gly	Lys
Thr 210	Leu	Gly	Leu	Ser	Tyr	Gly 215	Leu	Thr	Leu	Ser	Glu 220	Ala	Leu	Ile
Pro 225	Ala	Met	Pro	Ser	Thr 230	Thr	Ala	Arg	Ala	Gly 235	Gly	Ile	Phe	Leu
Ile	Ile	Lys	Ser	Leu 245	Ser	Leu	Ser	Ala	Gly 250	Ser	Lys	Pro	Asn 255	Ser
Ser	Ser	Arg	Lys 260	Leu	Gly	Ser	Tyr	Leu 265	Ile	Gln	Ser	Gln	Phe 270	Cys
Ala	Gly	Asn 275	Ser	Ser	Ala	Leu	Phe 280	Leu	Thr	Ala	Ala 285	Gln	Asn	Leu
Leu 290	Cys	Leu	Lys	Leu	Ala	Glu 295	Glu	Leu	Gly	Val	Val 300	Ile	Ser	Asn
Trp 305	Val	Ser	Trp	Phe	Lys 310	Ala	Ala	Ser	Leu	Pro 315	Ala	Ile	Ile	Ser
Leu	Cys	Thr	Pro	Leu 325	Ile	Leu	Tyr	Lys	Leu 330	Tyr	Pro	Pro	Glu	Lys

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Asp Thr Pro Glu Ala Pro Gly Ile Ala Ala Thr Lys Leu Lys Gln Met  
340 345 350

Gly Pro Val Thr Lys Asn Glu Trp Ile Met Val Gly Thr Met Leu Leu  
355 360 365

Ala Val Thr Leu Trp Ile Cys Gly Glu Thr Leu Gly Ile Pro Ser Val  
370 375 380

Val Ala Ala Met Ile Gly Leu Ser Ile Leu Leu Val Leu Gly Val Leu  
385 390 395 400

Asn Trp Asp Asp Cys Leu Ser Glu Lys Ser Ala Trp Asp Thr Leu Ala  
405 410 415

Trp Phe Ala Val Leu Val Gly Met Ala Gly Gln Leu Thr Asn Leu Gly  
420 425 430

Val Val Thr Trp Met Ser Asp Cys Val Ala Lys Val Leu Gln Ser Leu  
435 440 445

Ser Leu Ser Trp Pro Ala Ala Phe Gly Leu Leu Gln Ala Ala Tyr Phe  
450 455 460

Phe Ile His Tyr Leu Phe Ala Ser Gln Thr Gly His Val Gly Ala Leu  
465 470 475 480

Phe Ser Ala Phe Leu Ala Met His Ile Ala Ala Gly Val Pro Gly Ile  
485 490 495

Leu Ala Ala Leu Ala Leu Ala Tyr Asn Thr Asn Leu Phe Gly Ala Leu  
500 505 510

Thr His Tyr Ser Ser Gly Gln Ala Ala Val Tyr Tyr Gly Ala Gly Tyr  
515 520 525

Val Asp Leu Pro Asp Val Phe Lys Ile Gly Phe Val Met Ala Thr Ile  
530 535 540

Asn Ala Ile Ile Trp Gly Val Val Gly Thr Phe Trp Trp Lys Phe Leu  
545 550 555 560

Gly Leu Tyr

<210> 2175

&lt;211&gt; 549

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2175

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gatgacaaac aggaagctgt agcggtaaca actgctattc aagaggagat attcttggag      180
atggggattg acccgggatt tgggtattggc tgcttgggaa agctgaactc tgcatacgaa      240
aacgataaag agttgatgat tggttttctac aagtttctcg caaaggagga gatggcatgt      300
gaagaagctg agcttggaca agatggattt gaacagaaaa tgaaagcact acaacaatta      360
caagaacagc aactagagat gcttaagtat atgcgtaaat tctctctgga tgatcaatct      420
gctatccttc aaaagcttca gaagcaatta gaaaatgcgg gttttgagcc ggaggcgtct      480
ctttgtcag gagaggaaat ggaggaagct ggaagaagaa gagtttcacc tgtttttgga      540
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&lt;210&gt; 2176

&lt;211&gt; 182

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2176

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Met Ala Ser Ser   Leu Gln Ser Ser Gly Met Leu Thr Lys Glu Gln Met
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Val Tyr Leu Phe Asp Arg Phe Asp Tyr Leu Thr Ser Gln Ser Asp Val
      20           25           30
Lys Lys Arg Ile Ser Asp Ala Val Asp Asp Lys Gln Glu Ala Val Ala
      35           40           45
Val Thr Thr Ala Ile Gln Glu Glu Ile Phe Leu Glu Met Gly Ile Asp
      50           55           60
Pro Gly Phe Gly Ile Gly Cys Leu Gly Lys Leu Asn Ser Ala Tyr Glu
65           70           75           80
Asn Asp Lys Glu Leu Met Ile Gly Phe Tyr Lys Phe Leu Ala Lys Glu

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Glu Met Ala Cys Glu Glu Ala Glu Leu Gly Gln Asp Gly Phe Glu Gln  
 100 105 110

Lys Met Lys Ala Leu Gln Gln Leu Gln Glu Gln Gln Leu Glu Met Leu  
 115 120 125

Lys Tyr Met Arg Lys Phe Ser Leu Asp Asp Gln Ser Ala Ile Leu Gln  
 130 135 140

Lys Leu Gln Lys Gln Leu Glu Asn Ala Gly Phe Glu Pro Glu Ala Ser  
 145 150 155 160

Leu Leu Ser Gly Glu Glu Met Glu Glu Ala Gly Arg Arg Arg Val Ser  
 165 170 175

Pro Val Phe Gly Ser Arg  
 180

<210> 2177

<211> 948

<212> DNA

<213> Arabidopsis thaliana

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 attggctatc gtcacattga ttgtgctcag atctatggca acgaaaaaga gattggggca 180  
 gttctgaaaa aattgtttga agacagagta gtgaaacgcg aggatttgtt catcacctcc 240  
 aaactctggt gtactgatca tgacctcaa gatgtcccg aggatttgaa cagaactctc 300  
 aaggatctgc agcttgaata cgtcgatctt tatctgatac actggcctgc acggataaag 360  
 aaaggttctg ttggaataaa gccagagaac cttttgcctg tagatattcc tagtacatgg 420  
 aaagcgatgg aagcactata cgattcgggc aaggcacgag ccatagggtg aagcaatttc 480  
 tctaccaaga aactagctga tctcttgag ttagctcgtg ttctcctgc tgttaatcag 540  
 gtcgaatgtc atccttcttg gcgacaaact aagctacaag aattctgcaa atccaaaggg 600  
 gttcacctaa gtgcatactc gccattaggt tctccaggga caacatggct gaagagcgat 660  
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ggaaggatca aagagaactt taatgttttc gactgggtcaa taccggatta catgttcgct 840  
 aagtttgctg agattgaaca ggctaggtta gtcactggtt ccttccttgt tcatgagaca 900  
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<210> 2178

<211> 315

<212> PRT

<213> Arabidopsis thaliana

<400> 2178

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Pro Ser Val Gly Leu Gly Thr Trp Gln Ala Ser Pro Gly Leu Val Gly  
 20 25 30

Asp Ala Val Ala Ala Ala Val Lys Ile Gly Tyr Arg His Ile Asp Cys  
 35 40 45

Ala Gln Ile Tyr Gly Asn Glu Lys Glu Ile Gly Ala Val Leu Lys Lys  
 50 55 60

Leu Phe Glu Asp Arg Val Val Lys Arg Glu Asp Leu Phe Ile Thr Ser  
 65 70 75 80

Lys Leu Trp Cys Thr Asp His Asp Pro Gln Asp Val Pro Glu Ala Leu  
 85 90 95

Asn Arg Thr Leu Lys Asp Leu Gln Leu Glu Tyr Val Asp Leu Tyr Leu  
 100 105 110

Ile His Trp Pro Ala Arg Ile Lys Lys Gly Ser Val Gly Ile Lys Pro  
 115 120 125

Glu Asn Leu Leu Pro Val Asp Ile Pro Ser Thr Trp Lys Ala Met Glu  
 130 135 140

Ala Leu Tyr Asp Ser Gly Lys Ala Arg Ala Ile Gly Val Ser Asn Phe  
 145 150 155 160

Ser Thr Lys Lys Leu Ala Asp Leu Leu Glu Leu Ala Arg Val Pro Pro  
 165 170 175

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Ala Val Asn Gln Val Glu Cys His Pro Ser Trp Arg Gln Thr Lys Leu  
180 185 190

Gln Glu Phe Cys Lys Ser Lys Gly Val His Leu Ser Ala Tyr Ser Pro  
195 200 205

Leu Gly Ser Pro Gly Thr Thr Trp Leu Lys Ser Asp Val Leu Lys Asn  
210 215 220

Pro Ile Leu Asn Met Val Ala Glu Lys Leu Gly Lys Ser Pro Ala Gln  
225 230 235 240

Val Ala Leu Arg Trp Gly Leu Gln Met Gly His Ser Val Leu Pro Lys  
245 250 255

Ser Thr Asn Glu Gly Arg Ile Lys Glu Asn Phe Asn Val Phe Asp Trp  
260 265 270

Ser Ile Pro Asp Tyr Met Phe Ala Lys Phe Ala Glu Ile Glu Gln Ala  
275 280 285

Arg Leu Val Thr Gly Ser Phe Leu Val His Glu Thr Leu Ser Pro Tyr  
290 295 300

Lys Ser Ile Glu Glu Leu Trp Asp Gly Glu Ile  
305 310 315

<210> 2179

<211> 528

<212> DNA

<213> Arabidopsis thaliana

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gagaagaggg aaaggaattt gatgagagga agcttatgtg taagaaaggc attgccacat 180  
gatttgccat taatggctgt gatgggtcaa caaatagaag gaatgcgtga taccattaca 240  
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gaggagtacc gtggagatgg aggggatgga actggatatt gggctcatga aactcaagaa 420  
gacatagaag agaaagcaag agcggagcta tggcgtgaag aacttatcga agaaattgaa 480  
Page 3152

cagaagggtg gtggcttaag agagcttgaa gaagctgtta ctaagtag

528

&lt;210&gt; 2180

&lt;211&gt; 175

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2180

Met Ala Glu Ala Phe Thr Ser Phe Thr Phe Thr Asn Leu His Ile Pro  
1 5 10 15Ser Ser Tyr Asn His Ser Pro Lys Gln Asn Ser Gly Pro Asn His Gly  
20 25 30Tyr Trp Leu Ser Lys Asn Val Asn Glu Lys Arg Glu Arg Asn Leu Met  
35 40 45Arg Gly Ser Leu Cys Val Arg Lys Ala Leu Pro His Asp Leu Pro Leu  
50 55 60Met Ala Val Met Val Gln Gln Ile Glu Gly Met Arg Asp Ile Ile Thr  
65 70 75 80Glu Lys His Val Trp His Leu Ser Asp Lys Ala Ile Lys Asn Val Tyr  
85 90 95Met Phe Tyr Ile Met Phe Thr Cys Trp Gly Cys Leu Tyr Phe Gly Ser  
100 105 110Ala Lys Asp Pro Phe Tyr Asp Ser Glu Glu Tyr Arg Gly Asp Gly Gly  
115 120 125Asp Gly Thr Gly Tyr Trp Val Tyr Glu Thr Gln Glu Asp Ile Glu Glu  
130 135 140Lys Ala Arg Ala Glu Leu Trp Arg Glu Glu Leu Ile Glu Glu Ile Glu  
145 150 155 160Gln Lys Val Gly Gly Leu Arg Glu Leu Glu Glu Ala Val Thr Lys  
165 170 175

&lt;210&gt; 2181

&lt;211&gt; 1194

047-E2F-PCT.ST25.txt

<212> DNA

<213> *Arabidopsis thaliana*

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<400> 2181
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gaaggactgt ttgtcaatat tacatttggt cgaaacgcag tcgctaaagg ggccgtttgt    120
ttagatggaa gtcaccacgc ttatcatttg gatagaggtt ctggaactgg aatcaatagt    180
tggttgatac agcttgaggg aggaggatgg tgcaataatg taacaaattg cgtagtcgg    240
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tactgtgacg ggcatcatt cacaggagat gtagaagcag tgaaccctgc tactaatctt    420
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ataaacgccg agaagtctgt ttgtctggc tgttctgctg gcgggttagc ttcgctgatg    540
cattgtgata gtttccgtgc tctattaccg atgggaacca aagtaaaatg tctttcagat    600
gctggttttt tctcaacac aagagacgtc tcaggagttc aatacattaa aacatacttc    660
gaagatgttg ttacttctca tggatcagca aagaacttgc cgaggtcatg cacatcaaga    720
ttaactcctg caatgtgttt ctttccgcaa tatgtggctc gccagattag aactcctctg    780
ttcattctta atgccctta tgactcttgg cagataaaga acattttggc tccgcgagca    840
gctgacacct acggaanaat gcaaagtgtg caactagaca tcaagaattg ccatccaagt    900
cagatcaaag ttatgcaaga tttcagggtta gagttcttga gtgcagtgat aggttttaggg    960
agatcttcat caagagggat gttcatagat tcttgctaca ctactgcc aaccgagaca   1020
caacttcat ggttctggca agatttctca attctaaacc gaacgacaat agcaaaaagt   1080
gttgagatt gggtttatga cagaacattg ttcagaaga tagattgtcc ttacccttgt   1140
aaccctactt gccaccacag ggttttctact cctctagatg ctctccaat ttaa       1194

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<210> 2182

<211> 397

<212> PRT

<213> *Arabidopsis thaliana*

<400> 2182

Met Phe Lys Leu Lys Gln Trp Leu Ile Tyr Leu Val Cys Ser Leu Val  
 1 5 10 15



047-E2F-PCT.ST25.txt

Ile Met Asn Thr Glu Gly Leu Phe Val Asn Ile Thr Phe Val Arg Asn  
20 25 30

Ala Val Ala Lys Gly Ala Val Cys Leu Asp Gly Ser Pro Pro Ala Tyr  
35 40 45

His Leu Asp Arg Gly Ser Gly Thr Gly Ile Asn Ser Trp Leu Ile Gln  
50 55 60

Leu Glu Gly Gly Gly Trp Cys Asn Asn Val Thr Asn Cys Val Ser Arg  
65 70 75 80

Met His Thr Arg Leu Gly Ser Ser Lys Lys Met Val Glu Asn Leu Ala  
85 90 95

Phe Ser Ala Ile Leu Ser Asn Lys Lys Gln Tyr Asn Pro Asp Phe Tyr  
100 105 110

Asn Trp Asn Arg Val Lys Val Arg Tyr Cys Asp Gly Ala Ser Phe Thr  
115 120 125

Gly Asp Val Glu Ala Val Asn Pro Ala Thr Asn Leu His Phe Arg Gly  
130 135 140

Ala Arg Val Trp Leu Ala Val Met Gln Glu Leu Leu Ala Lys Gly Met  
145 150 155 160

Ile Asn Ala Glu Asn Ala Val Leu Ser Gly Cys Ser Ala Gly Gly Leu  
165 170 175

Ala Ser Leu Met His Cys Asp Ser Phe Arg Ala Leu Leu Pro Met Gly  
180 185 190

Thr Lys Val Lys Cys Leu Ser Asp Ala Gly Phe Phe Leu Asn Thr Arg  
195 200 205

Asp Val Ser Gly Val Gln Tyr Ile Lys Thr Tyr Phe Glu Asp Val Val  
210 215 220

Thr Leu His Gly Ser Ala Lys Asn Leu Pro Arg Ser Cys Thr Ser Arg  
225 230 235 240

Leu Thr Pro Ala Met Cys Phe Phe Pro Gln Tyr Val Ala Arg Gln Ile  
245 250 255

Arg Thr Pro Leu Phe Ile Leu Asn Ala Ala Tyr Asp Ser Trp Gln Ile  
3155

Lys Asn Ile Leu Ala Pro Arg Ala Ala Asp Pro Tyr Gly Lys Trp Gln  
275 280

Ser Cys Gln Leu Asp Ile Lys Asn Cys His Pro Ser Gln Ile Lys Val  
290 295 300

Met Gln Asp Phe Arg Leu Glu Phe Leu Ser Ala Val Ile Gly Leu Gly  
305 310 315 320

Arg Ser Ser Ser Arg Gly Met Phe Ile Asp Ser Cys Tyr Thr His Cys  
325 330 335

Gln Thr Glu Thr Gln Thr Ser Trp Phe Trp Gln Asp Ser Pro Ile Leu  
340 345 350

Asn Arg Thr Thr Ile Ala Lys Ala Val Gly Asp Trp Val Tyr Asp Arg  
355 360 365

Thr Leu Phe Gln Lys Ile Asp Cys Pro Tyr Pro Cys Asn Pro Thr Cys  
370 375 380

His His Arg Val Phe Thr Pro Leu Asp Ala Pro Pro Ile  
385 390 395

<210> 2183

<211> 546

<212> DNA

<213> Arabidopsis thaliana

<400> 2183  
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gagattgtca ccaccattcc caccatcggg tttaatgtgg agacgggtga gtacaagaac 180  
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tacttccaaa acactcaagg tctgatattt gttgttgata gcaatgacag agaccgtggt 300  
gttgaagcca gagatgaact tcacaggatg ttgaatgaag atgagcttcg ggatgcagta 360  
ttgcttggtg ttgccaacaa gcaggatctt ccaaacgcta tgaatgctgc tgagattact 420  
gataagcttg gcttctactc actccggcaa cgccactggt acatccaag cacatgcgca 480  
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gcttga

&lt;210&gt; 2184

&lt;211&gt; 181

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2184

Met Gly Leu Ser Phe Ala Lys Leu Phe Ser Arg Leu Phe Ala Lys Lys  
 1 5 10 15

Glu Met Arg Ile Leu Met Val Gly Leu Asp Ala Ala Gly Lys Thr Thr  
 20 25 30

Ile Leu Tyr Lys Leu Lys Leu Gly Glu Ile Val Thr Thr Ile Pro Thr  
 35 40 45

Ile Gly Phe Asn Val Glu Thr Val Glu Tyr Lys Asn Ile Ser Phe Thr  
 50 55 60

Val Trp Asp Val Gly Gly Gln Asp Lys Ile Arg Pro Leu Trp Arg His  
 65 70 75 80

Tyr Phe Gln Asn Thr Gln Gly Leu Ile Phe Val Val Asp Ser Asn Asp  
 85 90 95

Arg Asp Arg Val Val Glu Ala Arg Asp Glu Leu His Arg Met Leu Asn  
 100 105 110

Glu Asp Glu Leu Arg Asp Ala Val Leu Leu Val Phe Ala Asn Lys Gln  
 115 120 125

Asp Leu Pro Asn Ala Met Asn Ala Ala Glu Ile Thr Asp Lys Leu Gly  
 130 135 140

Leu His Ser Leu Arg Gln Arg His Trp Tyr Ile Gln Ser Thr Cys Ala  
 145 150 155 160

Thr Ser Gly Glu Gly Leu Tyr Glu Gly Leu Asp Trp Leu Ser Asn Asn  
 165 170 175

Ile Ala Ser Lys Ala  
 180

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<210> 2185

<211> 1239

<212> DNA

<213> *Arabidopsis thaliana*

<400> 2185

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cgaggagtct ttcggtttggc attcacgcgc cgccgtgtta ctctatcgcc gaatgctcgg	120
aggagaatat tgagagtttc ggcgaaagcg tcgacgaaga atgctatgga gtataggaaa	180
ttaggagatt ccgatctcaa catcacgcga gttactatgg gcactatgac atttggggag	240
caaataactg agaaagaatc tcatgagatg ctgagttatg caattgaaga gggcatcaat	300
tgcatcgaca ctgctgaagc ttatcccata ccgatgaaga aggagacgca aggtaaaacg	360
gatctttata tcagtagctg gttgaagtct cagcaacgtg acaagatagt tttggcaact	420
aaagtatgtg ggtactcaga aaggtcagct tacataaggg acagtgggtg gattctgcgt	480
gtagatgctg ctaatatcaa agaaagtgtt gagaaaagtc ttaagcgctt tggaaactgat	540
tacattgact tgcctcaaat acactggcca gatcgatacg taccactctt cggtgatttt	600
tactatgaaa cgtcgaaatg gagacctagt gtgccattcg ctgagcaact aagagccttt	660
caggatctca tagttgaagg aaagggtcgc tatatcggtg tctcgaatga aacttcatac	720
ggagtgcagg agtttgttaa cacagcaaaa ctgcaaggac taccaaatgat tgtgagcatc	780
cagaatggtt acagcttgct agtttagatg cggtatgaag ttgatctggt agaagtatgc	840
cacccaaaaa attgcaatgt tggcttgctt gcttattccc ctcttgagg cggtcgtttg	900
tctgggaaat acttggtcac agaccaagaa gctacaaaaa atgcaaggct gaatcttttc	960
ccaggatata tggaaagtta caagggtatc ctgaccaagg aagcaacat acaatagctt	1020
gaggtggcga agaagtacgg tttaaactcg gttgagttag cactcgggtt tgtactgtac	1080
aggccctttg tgacgagcac gatcatcggg gccacatcgg taaaacaact taaagaagac	1140
attgatgctt ttctgatgac ggagcggcgg ttttcgcagg aagttatggc agacattgac	1200
gccgttttca agaggttcaa agacccttct ttcgttttga	1239

<210> 2186

<211> 412

<212> PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2186

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Met Ala Ser Ser Tyr Val Thr Tyr Ser Thr Val Thr Pro Val Val Ser
 1          5          10          15

Ser Ser Asn Ile Arg Gly Val Phe Arg Leu Ala Phe Thr Arg Arg Arg
          20          25          30

Val Thr Leu Ser Pro Asn Ala Arg Arg Arg Ile Leu Arg Val Ser Ala
          35          40          45

Lys Ala Ser Thr Lys Asn Ala Met Glu Tyr Arg Lys Leu Gly Asp Ser
 50          55          60

Asp Leu Asn Ile Ser Glu Val Thr Met Gly Thr Met Thr Phe Gly Glu
65          70          75          80

Gln Asn Thr Glu Lys Glu Ser His Glu Met Leu Ser Tyr Ala Ile Glu
          85          90          95

Glu Gly Ile Asn Cys Ile Asp Thr Ala Glu Ala Tyr Pro Ile Pro Met
100          105          110

Lys Lys Glu Thr Gln Gly Lys Thr Asp Leu Tyr Ile Ser Ser Trp Leu
115          120          125

Lys Ser Gln Gln Arg Asp Lys Ile Val Leu Ala Thr Lys Val Cys Gly
130          135          140

Tyr Ser Glu Arg Ser Ala Tyr Ile Arg Asp Ser Gly Glu Ile Leu Arg
145          150          155          160

Val Asp Ala Ala Asn Ile Lys Glu Ser Val Glu Lys Ser Leu Lys Arg
          165          170          175

Leu Gly Thr Asp Tyr Ile Asp Leu Leu Gln Ile His Trp Pro Asp Arg
180          185          190

Tyr Val Pro Leu Phe Gly Asp Phe Tyr Tyr Glu Thr Ser Lys Trp Arg
195          200          205

Pro Ser Val Pro Phe Ala Glu Gln Leu Arg Ala Phe Gln Asp Leu Ile
210          215          220

Val Glu Gly Lys Val Arg Tyr Ile Gly Val Ser Asn Glu Thr Ser Tyr
225          230          235          240

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Gly Val Thr Glu Phe Val Asn Thr Ala Lys Leu Glu Gly Leu Pro Lys  
245 250 255

Ile Val Ser Ile Gln Asn Gly Tyr Ser Leu Leu Val Arg Cys Arg Tyr  
260 265 270

Glu Val Asp Leu Val Glu Val Cys His Pro Lys Asn Cys Asn Val Gly  
275 280 285

Leu Leu Ala Tyr Ser Pro Leu Gly Gly Gly Ser Leu Ser Gly Lys Tyr  
290 295 300

Leu Ala Thr Asp Gln Glu Ala Thr Lys Asn Ala Arg Leu Asn Leu Phe  
305 310 315 320

Pro Gly Tyr Met Glu Arg Tyr Lys Gly Ser Leu Ala Lys Glu Ala Thr  
325 330 335

Ile Gln Tyr Val Glu Val Ala Lys Lys Tyr Gly Leu Thr Pro Val Glu  
340 345 350

Leu Ala Leu Gly Phe Val Arg Asp Arg Pro Phe Val Thr Ser Thr Ile  
355 360 365

Ile Gly Ala Thr Ser Val Lys Gln Leu Lys Glu Asp Ile Asp Ala Phe  
370 375 380

Leu Met Thr Glu Arg Pro Phe Ser Gln Glu Val Met Ala Asp Ile Asp  
385 390 395 400

Ala Val Phe Lys Arg Phe Lys Asp Pro Ser Phe Val  
405 410

<210> 2187

<211> 213

<212> DNA

<213> Arabidopsis thaliana

<400> 2187  
atggcttttg ttgtaacatc cctgatattc gctgtcgtag gcatcattgc ttcgatatgc 60  
actagaatct gcttcaacaa aggccctcc accaatctgt tacatcttac attggtcatc 120  
accgcaactg tctgctgttg gatgatgtgg gcaattgtat acattgcgca gatgaaccct 180  
ctcattgtcc ctatcttaag cgaggtggag tag 213

&lt;210&gt; 2188

&lt;211&gt; 70

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2188

Met Ala Phe Val Val Thr Ser Leu Ile Phe Ala Val Val Gly Ile Ile  
 1 5 10 15

Ala Ser Ile Cys Thr Arg Ile Cys Phe Asn Lys Gly Pro Ser Thr Asn  
 20 25 30

Leu Leu His Leu Thr Leu Val Ile Thr Ala Thr Val Cys Cys Trp Met  
 35 40 45

Met Trp Ala Ile Val Tyr Ile Ala Gln Met Asn Pro Leu Ile Val Pro  
 50 55 60

Ile Leu Ser Glu Val Glu  
 65 70

&lt;210&gt; 2189

&lt;211&gt; 600

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2189

atggcgagc gatctagggt tatcaccatg tctcctctca ttctcgatca agaagttgat	60
ctcgatctct ggggaagtgt taatccttct gatggcgagt tctccgagca ttctttctcc	120
gtcgatagtc ttccgagca tgacgtcata tctcttgacg acgcttcctt tgtcgacccc	180
tctgtcattt ctccgccgca tgagataatt cctattgctg acgggtgtga tctcgccgtg	240
gatctggatg gtgatgatga tgttgccgat gatgtcgttc gcgatgaagt tgatgagaat	300
gatcttggat ggtctcagca gcggatgatg ttctcgggtg gaggttctgg ttattctggt	360
ggaattacgt acggagatag tgtaaatgac gacggcgaag aagatcgca gtacgacgat	420
tcgtatgatc ttgacgaaga gttggttccg cgtagcgtga gtaagaaggt ggggagacaa	480
aggatgagga aactggggaa aagagcaatc gccaaaggtct atgcctcgaa gatattcccg	540

tttttgaagc ctggtatcgt tcgtggttaag catggtctcg gcatgaaatt caagtgtga 600

<210> 2190

<211> 199

<212> PRT

<213> Arabidopsis thaliana

<400> 2190

Met Ala Gln Arg Ser Arg Val Ile Thr Met Ser Pro Leu Ile Leu Asp  
1 5 10 15

Gln Glu Val Asp Leu Asp Leu Trp Glu Val Val Asn Pro Ser Asp Gly  
20 25 30

Glu Phe Ser Asp Asp Ser Phe Ser Val Asp Ser Leu Ser Asp Asp Asp  
35 40 45

Val Ile Ser Leu Asp Asp Ala Ser Phe Val Ala Pro Ser Val Ile Ser  
50 55 60

Pro Pro His Glu Ile Ile Pro Ile Ala Asp Gly Gly Asp Leu Ala Val  
65 70 75 80

Asp Leu Asp Gly Asp Asp Asp Val Gly Asp Asp Val Val Arg Asp Glu  
85 90 95

Val Asp Glu Asn Asp Leu Gly Trp Ser Gln Gln Arg Met Met Phe Leu  
100 105 110

Gly Gly Gly Ser Gly Tyr Ser Val Gly Ile Thr Tyr Gly Asp Ser Val  
115 120 125

Asn Asp Asp Gly Glu Glu Asp Arg Glu Tyr Asp Asp Ser Tyr Asp Leu  
130 135 140

Asp Glu Glu Leu Val Pro Arg Ser Val Ser Lys Lys Val Gly Arg Gln  
145 150 155 160

Arg Met Arg Lys Leu Gly Lys Arg Ala Ile Ala Lys Val Tyr Ala Ser  
165 170 175

Lys Ile Ser Pro Phe Leu Lys Pro Gly Ile Val Arg Gly Lys His Gly  
180 185 190



Leu Gly Met Lys Phe Lys Cys  
195

<210> 2191

<211> 477

<212> DNA

<213> *Arabidopsis thaliana*

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<400> 2191
atggcagaag cgtctagttt ggtggggaaa cttgagacag aagtggagat caaagcttcg      60
gccaaaaagt tccatcacat gtttaccgag agaccacacc atgtctccaa agcaactcca      120
gataaaattc atggatgtga gctgcacgaa ggcgactggg gcaaagtcgg ctctatcgtc      180
atctggaaat acgttcatga tggaaagtta acagtgggga agaataagat cgaggcggtg      240
gatccggaga agaacctgat cacgttcaag gttttagaag gtgatctgat gaatgagtac      300
aagagcttcg catttacct ccaagtgacc cctaagcaag gggagtcagg gagtattgcg      360
cactggcacc tggagtatga gaaaattagc gaggaggtag ctcatcccga aaccttcttc      420
caattctgtg tcgagatctc caaagagatc gacgaacatc tcttggccga ggaatag      477

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<210> 2192

<211> 158

<212> PRT

<213> *Arabidopsis thaliana*

<400> 2192

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Met Ala Glu Ala Ser Ser Leu Val Gly Lys Leu Glu Thr Glu Val Glu
 1           5           10           15
Ile Lys Ala Ser Ala Lys Lys Phe His His Met Phe Thr Glu Arg Pro
      20           25           30
His His Val Ser Lys Ala Thr Pro Asp Lys Ile His Gly Cys Glu Leu
      35           40           45
His Glu Gly Asp Trp Gly Lys Val Gly Ser Ile Val Ile Trp Lys Tyr
      50           55           60
Val His Asp Gly Lys Leu Thr Val Gly Lys Asn Lys Ile Glu Ala Val
65           70           75           80

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Asp Pro Glu Lys Asn Leu Ile Thr Phe Lys Val Leu Glu Gly Asp Leu  
85 90 95

Met Asn Glu Tyr Lys Ser Phe Ala Phe Thr Leu Gln Val Thr Pro Lys  
100 105 110

Gln Gly Glu Ser Gly Ser Ile Ala His Trp His Leu Glu Tyr Glu Lys  
115 120 125

Ile Ser Glu Glu Val Ala His Pro Glu Thr Leu Leu Gln Phe Cys Val  
130 135 140

Glu Ile Ser Lys Glu Ile Asp Glu His Leu Leu Ala Glu Glu  
145 150 155

<210> 2193

<211> 363

<212> DNA

<213> Arabidopsis thaliana

<400> 2193  
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gaagcaaacc tcttaagctc gctacaccg accaacaact ttggctcatg tcccagaaac 120  
ccattgcaac taggcgtatg tgccaacgtc cttggcctag ccaatgttac agctggcgac 180  
cccagagcac gacagtgttg cactgccctc aatggcctca ctaatgttca agtaaccgat 240  
tgtctctgct ttatcttcag gccgattccg ttgggttttcg gtattgatgt ggccgtaga 300  
gaaatctttt ttgcttgcaa tagggttttt cctatcggtt tccagtgtcc accaccacag 360  
taa 363

<210> 2194

<211> 120

<212> PRT

<213> Arabidopsis thaliana

<400> 2194

Met Ala Ser Lys Ser Ser Thr Thr Ile Ser Leu Ile Ile Ile Leu Leu  
1 5 10 15

Ile Ser Leu Ala Glu Ala Asn Leu Leu Ser Ser Pro Thr Pro Thr Asn  
20 25 30

Asn Phe Gly Ser Cys Pro Arg Asn Pro Leu Gln Leu Gly Val Cys Ala  
35 40 45

Asn Val Leu Gly Leu Ala Asn Val Thr Ala Gly Asp Pro Arg Ala Arg  
50 55 60

Gln Cys Cys Thr Ala Leu Asn Gly Leu Thr Asn Val Gln Val Thr Asp  
65 70 75 80

Cys Leu Cys Phe Ile Phe Arg Pro Ile Pro Leu Val Phe Gly Ile Asp  
85 90 95

Val Ala Val Arg Glu Ile Phe Phe Ala Cys Asn Arg Val Phe Pro Ile  
100 105 110

Gly Phe Gln Cys Pro Pro Pro Gln  
115 120

<210> 2195

<211> 783

<212> DNA

<213> Arabidopsis thaliana

<400> 2195

atggcagaag agtacaagaa caccgttcca gagcaggaga cccctaagggt tgcaacacagag	60
gaatcatcgg cgccagagat taaggagcgg ggaatgttcg atttcttgaa gaaaaaggag	120
gaagttaaac ctcaagaaac gacgactctc gcgtctgagt ttgagcacia gactcagatc	180
tctgaaccag agtcgtttgt ggccaagcac gaagaagagg aacataagcc tactcttctc	240
gagcagcttc accagaagca cgaggaggaa gaagaaaaca agccaagtct cctcgacaaa	300
ctccaccgat ccaacagctc ttcttcctct tcgagtgatg aagaagggtga agacggtgag	360
aagaagaaga aggagaaaaa gaagaagatt gttgaaggag atcatgtgaa aacagtggaa	420
gaagagaatc aaggagtaat ggacaggatt aaggagaagt ttccactcgg agagaaacca	480
gggggtgatg atgtaccagt cgtcaccacc atgccagcac cacattcggg agaggatcac	540
aaaccagagg aagaagagaa gaaagggttt atggataaga tcaaggagaa gcttcaggc	600
cacagcaaga aaccagagga ttcacaagtc gtcaacacca caccgctggt tgaaacagca	660
acaccgattg ctgacatccc ggaggagaag aagggtatta tggaacaagt caaagagaag	720

cttcacaggtt atcacgcca gaccactgga gaggaagaga agaaagaaaa agtgtctgat 780  
taa 783

<210> 2196

<211> 260

<212> PRT

<213> Arabidopsis thaliana

<400> 2196

Met Ala Glu Glu Tyr Lys Asn Thr Val Pro Glu Gln Glu Thr Pro Lys  
1 5 10 15

Val Ala Thr Glu Glu Ser Ser Ala Pro Glu Ile Lys Glu Arg Gly Met  
20 25 30

Phe Asp Phe Leu Lys Lys Lys Glu Glu Val Lys Pro Gln Glu Thr Thr  
35 40 45

Thr Leu Ala Ser Glu Phe Glu His Lys Thr Gln Ile Ser Glu Pro Glu  
50 55 60

Ser Phe Val Ala Lys His Glu Glu Glu Glu His Lys Pro Thr Leu Leu  
65 70 75 80

Glu Gln Leu His Gln Lys His Glu Glu Glu Glu Glu Asn Lys Pro Ser  
85 90 95

Leu Leu Asp Lys Leu His Arg Ser Asn Ser Ser Ser Ser Ser Ser  
100 105 110

Asp Glu Glu Gly Glu Asp Gly Glu Lys Lys Lys Lys Glu Lys Lys Lys  
115 120 125

Lys Ile Val Glu Gly Asp His Val Lys Thr Val Glu Glu Glu Asn Gln  
130 135 140

Gly Val Met Asp Arg Ile Lys Glu Lys Phe Pro Leu Gly Glu Lys Pro  
145 150 155 160

Gly Gly Asp Asp Val Pro Val Val Thr Thr Met Pro Ala Pro His Ser  
165 170 175

Val Glu Asp His Lys Pro Glu Glu Glu Lys Lys Gly Phe Met Asp  
180 185 190

Lys Ile Lys Glu Lys Leu Pro Gly His Ser Lys Lys Pro Glu Asp Ser  
 195 200 205

Gln Val Val Asn Thr Thr Pro Leu Val Glu Thr Ala Thr Pro Ile Ala  
 210 215 220

Asp Ile Pro Glu Glu Lys Lys Gly Phe Met Asp Lys Ile Lys Glu Lys  
 225 230 235 240

Leu Pro Gly Tyr His Ala Lys Thr Thr Gly Glu Glu Glu Lys Lys Glu  
 245 250 255

Lys Val Ser Asp  
 260

<210> 2197

<211> 1605

<212> DNA

<213> Arabidopsis thaliana

<400> 2197  
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 atcacaggcc aactaggcat gatctgggag ctgtgaaaag caccagtgat tgtccctctt 120  
 cttcaattag ctgtttacat ctgtttgctt atgtctgtca tgcttttatg tgagaggggt 180  
 tacatgggaa tcgtcatcgt cctcgtaaaa ctcttctgga aaaaaccaga caaacgttac 240  
 aagttcgagc ccattcacga tgatgaagag ctgggtagct ccaatttccc cgctgccttc 300  
 gtacaaatcc ccattgtcaa cgaacgagag gtttataagc tatcaatagg agcggcgtgt 360  
 ggactttcct ggccgtccga tcgtctcgtg attcaagtgt tagatgactc tacagatcct 420  
 actgttaagc aaatggtgga agtggagtgt caaagatggg caagtaaagg aatcaatatt 480  
 aggtatcaaa taagagagaa tagagtgtgt tacaagccg gtgctttaaa ggaaggactc 540  
 aaacgtagtt atgtcaagca ttgcgagtat gttgtcatct tcgacgccga ttttcagccc 600  
 gaacctgatt ttcttcgccg tagcattcct ttctcatgc acaatcccaa cattgccttg 660  
 gttcaggctc gatggcgggt cgtaaattct gatgagtgtc tattgacgag aatgaagaa 720  
 atgtcattgg attaccattt cactgttgag caagaagtgg gttcatcaac acatgctttt 780  
 ttcggcttca acggaaccgc cggaaatagg agaatacgcg cgataaatga agctgggtgg 840  
 tggaaagatc ggaccacctg ggaagatatg gatctcgccg tccgagcaag tcttcgcggc 900

tggaatttc tctacctcgg tgaccttcag gtgaaaagtg agcttccaag tactttttaga 960  
 gccttcggtt ttcagcaaca tagatggtct tgtggacctg caaatctctt taggaaaatg 1020  
 gttatggaga tcgtaagaaa caagaaagtg agattctgga agaaagtgtg cgtgatatac 1080  
 agcttcttct ttgtgaggaa aatcattgca cattgggtca cattttgttt ctactgcgtt 1140  
 gttcttcctc tcacaatttc cgtcccggag gttaaagtgc cgatttgggg ttcggtttat 1200  
 atcccatcca tcatcactat cctcaattcc gtcggtactc caaggtaaat tcatctgctg 1260  
 ttctattgga ttctattcga gaatgtgatg tcgctgcacc ggacaaaggc cactctcatt 1320  
 ggtctgtttg aggcaaggag ggctaacgag tgggtagtga ctgctaagct tgggaagcgg 1380  
 cagagcgcta aaggaaacac taaagggtac aaaagggtcc caagaatctt caaattgcct 1440  
 gatcgattga atacattgga gcttgattt gcggctttct tgttcgtgtg cggatgctat 1500  
 gactttgtgc acgggaagaa caattacttc atctacctgt ttcttcagac aatgtctttc 1560  
 ttcatcagtg ggctgggctg gatcgggact tatgtccga gttag 1605

<210> 2198

<211> 534

<212> PRT

<213> *Arabidopsis thaliana*

<400> 2198

Met Asp Gly Val Ser Pro Lys Phe Val Leu Pro Glu Thr Phe Asp Gly  
 1 5 10 15

Val Arg Met Glu Ile Thr Gly Gln Leu Gly Met Ile Trp Glu Leu Val  
 20 25 30

Lys Ala Pro Val Ile Val Pro Leu Leu Gln Leu Ala Val Tyr Ile Cys  
 35 40 45

Leu Leu Met Ser Val Met Leu Leu Cys Glu Arg Val Tyr Met Gly Ile  
 50 55 60

Val Ile Val Leu Val Lys Leu Phe Trp Lys Lys Pro Asp Lys Arg Tyr  
 65 70 75 80

Lys Phe Glu Pro Ile His Asp Asp Glu Glu Leu Gly Ser Ser Asn Phe  
 85 90 95

Pro Val Val Leu Val Gln Ile Pro Met Phe Asn Glu Arg Glu Val Tyr  
 100 105 110

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Lys Leu Ser Ile Gly Ala Ala Cys Gly Leu Ser Trp Pro Ser Asp Arg  
 115 120 125  
 Leu Val Ile Gln Val Leu Asp Asp Ser Thr Asp Pro Thr Val Lys Gln  
 130 135 140  
 Met Val Glu Val Glu Cys Gln Arg Trp Ala Ser Lys Gly Ile Asn Ile  
 145 150 155 160  
 Arg Tyr Gln Ile Arg Glu Asn Arg Val Gly Tyr Lys Ala Gly Ala Leu  
 165 170 175  
 Lys Glu Gly Leu Lys Arg Ser Tyr Val Lys His Cys Glu Tyr Val Val  
 180 185 190  
 Ile Phe Asp Ala Asp Phe Gln Pro Glu Pro Asp Phe Leu Arg Arg Ser  
 195 200 205  
 Ile Pro Phe Leu Met His Asn Pro Asn Ile Ala Leu Val Gln Ala Arg  
 210 215 220  
 Trp Arg Phe Val Asn Ser Asp Glu Cys Leu Leu Thr Arg Met Gln Glu  
 225 230 235 240  
 Met Ser Leu Asp Tyr His Phe Thr Val Glu Gln Glu Val Gly Ser Ser  
 245 250 255  
 Thr His Ala Phe Phe Gly Phe Asn Gly Thr Ala Gly Ile Trp Arg Ile  
 260 265 270  
 Ala Ala Ile Asn Glu Ala Gly Gly Trp Lys Asp Arg Thr Thr Val Glu  
 275 280 285  
 Asp Met Asp Leu Ala Val Arg Ala Ser Leu Arg Gly Trp Lys Phe Leu  
 290 295 300  
 Tyr Leu Gly Asp Leu Gln Val Lys Ser Glu Leu Pro Ser Thr Phe Arg  
 305 310 315 320  
 Ala Phe Arg Phe Gln Gln His Arg Trp Ser Cys Gly Pro Ala Asn Leu  
 325 330 335  
 Phe Arg Lys Met Val Met Glu Ile Val Arg Asn Lys Lys Val Arg Phe  
 340 345 350  
 Trp Lys Lys Val Tyr Val Ile Tyr Ser Phe Phe Phe Val Arg Lys Ile

355  
 360 047-E2F-PCT.ST25.txt  
 365  
 Ile Ala His Trp Val Thr Phe Cys Phe Tyr Cys Val Val Leu Pro Leu  
 370 375  
 Thr Ile Leu Val Pro Glu Val Lys Val Pro Ile Trp Gly Ser Val Tyr  
 385 390 395 400  
 Ile Pro Ser Ile Ile Thr Ile Leu Asn Ser Val Gly Thr Pro Arg Ser  
 405 410 415  
 Ile His Leu Leu Phe Tyr Trp Ile Leu Phe Glu Asn Val Met Ser Leu  
 420 425 430  
 His Arg Thr Lys Ala Thr Leu Ile Gly Leu Phe Glu Ala Gly Arg Ala  
 435 440 445  
 Asn Glu Trp Val Val Thr Ala Lys Leu Gly Ser Gly Gln Ser Ala Lys  
 450 455 460  
 Gly Asn Thr Lys Gly Ile Lys Arg Phe Pro Arg Ile Phe Lys Leu Pro  
 465 470 475 480  
 Asp Arg Leu Asn Thr Leu Glu Leu Gly Phe Ala Ala Phe Leu Phe Val  
 485 490 495  
 Cys Gly Cys Tyr Asp Phe Val His Gly Lys Asn Asn Tyr Phe Ile Tyr  
 500 505 510  
 Leu Phe Leu Gln Thr Met Ser Phe Phe Ile Ser Gly Leu Gly Trp Ile  
 515 520 525  
 Gly Thr Tyr Val Pro Ser  
 530

<210> 2199

<211> 675

<212> DNA

<213> Arabidopsis thaliana

<400> 2199  
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 gtcgagatgg ctctcaaac caaaggcata cgtacgagt acgtggaaga gatactggag 120  
 aacaaaagcc ctttgcttct tgctcttaac cctattcaca agaaagtccc tgttcttgc 180



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cacaatggta aaaccattct cgagtctcat gtgattcttg aatacatcga tgaacttgg 240  
 ccacaaaatc caattctccc tcaagatcct tatgaaagat ccaaagctcg tttctttgct 300  
 aaactcgtcg atgaacagat tatgaacgtg gggtttatat caatggcaag agcagacgag 360  
 aaaggaagag aagtttttagc cgagcaggta agagaactga ttatgtatct cgagaaagaa 420  
 cttgtcggaa aagattactt cggaggcaag actgtcggat tcttggaact tgtcgccgga 480  
 agtttaattc cgttttgttt ggagagaggt tgggaaggaa taggattgga agtgattaca 540  
 gaggagaagt ttccagagtt caagagatgg gttaggaatt tggagaaggt tgagattgtt 600  
 aaagattgtg ttccaccaag agaggaacat gtagaacaca tgaactatat ggcagagaga 660  
 gtgagatctt ctttaa 675

&lt;210&gt; 2200

&lt;211&gt; 224

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2200

Met Ala Glu Lys Glu Glu Val Lys Leu Leu Gly Ile Trp Ala Ser Pro  
 1 5 10 15

Phe Ser Arg Arg Val Glu Met Ala Leu Lys Leu Lys Gly Ile Pro Tyr  
 20 25 30

Glu Tyr Val Glu Glu Ile Leu Glu Asn Lys Ser Pro Leu Leu Ala  
 35 40 45

Leu Asn Pro Ile His Lys Lys Val Pro Val Leu Val His Asn Gly Lys  
 50 55 60

Thr Ile Leu Glu Ser His Val Ile Leu Glu Tyr Ile Asp Glu Thr Trp  
 65 70 75 80

Pro Gln Asn Pro Ile Leu Pro Gln Asp Pro Tyr Glu Arg Ser Lys Ala  
 85 90 95

Arg Phe Phe Ala Lys Leu Val Asp Glu Gln Ile Met Asn Val Gly Phe  
 100 105 110

Ile Ser Met Ala Arg Ala Asp Glu Lys Gly Arg Glu Val Leu Ala Glu  
 115 120 125

047-E2F-PCT.ST25.txt

Gln Val Arg Glu Leu Ile Met Tyr Leu Glu Lys Glu Leu Val Gly Lys  
130 135 140

Asp Tyr Phe Gly Gly Lys Thr Val Gly Phe Leu Asp Phe Val Ala Gly  
145 150 155 160

Ser Leu Ile Pro Phe Cys Leu Glu Arg Gly Trp Glu Gly Ile Gly Leu  
165 170 175

Glu Val Ile Thr Glu Glu Lys Phe Pro Glu Phe Lys Arg Trp Val Arg  
180 185 190

Asn Leu Glu Lys Val Glu Ile Val Lys Asp Cys Val Pro Pro Arg Glu  
195 200 205

Glu His Val Glu His Met Asn Tyr Met Ala Glu Arg Val Arg Ser Ser  
210 215 220

<210> 2201

<211> 351

<212> DNA

<213> Arabidopsis thaliana

<400> 2201  
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cgtgatagcc taagagaca tagagaagag gttgccggaa aagttcctat accggatagt 180  
tggggaaaag aaggattgct tatgggatgg atggattttt cgaccttcga cgctgctttt 240  
acgtctagcc agattgtctc tgctcgagct gcgttaatgg ctgactcagg agacgatgcc 300  
ggagctagag gaagtaggcc tcaacgcctt cgagttgaga gttcttgttg a 351

<210> 2202

<211> 116

<212> PRT

<213> Arabidopsis thaliana

<400> 2202

Met Lys Asn Thr Asn Leu Pro Glu Glu Thr Lys Glu Pro Ile Ser Pro  
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Gly Ser Ser His Arg Lys Gln Asn Lys Thr Gly Thr Lys Thr Cys Phe  
 20 25 30

Pro Glu Thr Thr Val Leu Ser Gly Arg Asp Arg Leu Lys Arg His Arg  
 35 40 45

Glu Glu Val Ala Gly Lys Val Pro Ile Pro Asp Ser Trp Gly Lys Glu  
 50 55 60

Gly Leu Leu Met Gly Trp Met Asp Phe Ser Thr Phe Asp Ala Ala Phe  
 65 70 75 80

Thr Ser Ser Gln Ile Val Ser Ala Arg Ala Ala Leu Met Ala Asp Ser  
 85 90 95

Gly Asp Asp Ala Gly Ala Arg Gly Ser Arg Pro Gln Arg Leu Arg Val  
 100 105 110

Glu Ser Ser Cys  
 115

<210> 2203

<211> 972

<212> DNA

<213> Arabidopsis thaliana

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 gtgtatctga acaatgttgt tgatggttgc gtggctcgta tcgctgcgaa gcttgagatg 120  
 atggagcctt gttctagcgt caaagacaga atcgcgtata gtatgatcaa agatgcagaa 180  
 gacaaaggat tgattacttc cggaaagagt acattgatag agccaactgc tggtaacacc 240  
 gggattggtt tagcttgcat gggagctgca agaggctata aagtgatcct tgtgatgcct 300  
 tcaactatga gcttagagag aagaatcatt ctgagggcac taggtgcaga gcttcatttc 360  
 tcggaccagc gcataggcct taaaggaaatg ttggagaaaa ctgaagcgat ttttaagcaaa 420  
 actcctggtg gttacattcc acaacaattt gaaaatcctg caaaccgccg gattcattac 480  
 cgaaccacgg gaccggaaat atggagagat tcagccggga aagtagatat attggtcgct 540  
 ggcgtagggg ctggtggaac tgctactgga gtaggggaagt tcctcaagga gcagaacaaa 600  
 gacatcaagg tttgtgtggt ggaaccagta gaaagtcagg tacttagcgg aggtcaacca 660

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gccctcaaag aaggattact ggtgggaata tcctctggag ccgcagcagc ggctgcgtta 840
aagggtgcaa agcggccaga aaacgcgggg aaactcattg tgggtggttt tcctagtggg 900
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&lt;210&gt; 2204

&lt;211&gt; 323

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2204

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Met Glu Asp Arg Cys Leu Ile Lys Asn Asp Ile Thr Glu Leu Ile Gly
1      5      10      15

```

```

Asn Thr Pro Met Val Tyr Leu Asn Asn Val Val Asp Gly Cys Val Ala
20      25      30

```

```

Arg Ile Ala Ala Lys Leu Glu Met Met Glu Pro Cys Ser Ser Val Lys
35      40      45

```

```

Asp Arg Ile Ala Tyr Ser Met Ile Lys Asp Ala Glu Asp Lys Gly Leu
50      55      60

```

```

Ile Thr Pro Gly Lys Ser Thr Leu Ile Glu Pro Thr Ala Gly Asn Thr
65      70      75      80

```

```

Gly Ile Gly Leu Ala Cys Met Gly Ala Ala Arg Gly Tyr Lys Val Ile
85      90      95

```

```

Leu Val Met Pro Ser Thr Met Ser Leu Glu Arg Arg Ile Ile Leu Arg
100     105     110

```

```

Ala Leu Gly Ala Glu Leu His Leu Ser Asp Gln Arg Ile Gly Leu Lys
115     120

```

```

Gly Met Leu Glu Lys Thr Glu Ala Ile Leu Ser Lys Thr Pro Gly Gly
130     135     140

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Tyr Ile Pro Gln Gln Phe Glu Asn Pro Ala Asn Pro Glu Ile His Tyr
145     150     155     160

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Arg Thr Thr Gly Pro Glu Ile Trp Arg Asp Ser Ala Gly Lys Val Asp  
165 170 175

Ile Leu Val Ala Gly Val Gly Thr Gly Gly Thr Ala Thr Gly Val Gly  
180 185 190

Lys Phe Leu Lys Glu Gln Asn Lys Asp Ile Lys Val Cys Val Val Glu  
195 200 205

Pro Val Glu Ser Pro Val Leu Ser Gly Gly Gln Pro Gly Pro His Leu  
210 215 220

Ile Gln Gly Ile Gly Ser Gly Ile Val Pro Phe Asn Leu Asp Leu Thr  
225 230 235 240

Ile Val Asp Glu Ile Ile Gln Val Ala Gly Glu Glu Ala Ile Glu Thr  
245 250 255

Ala Lys Leu Leu Ala Leu Lys Glu Gly Leu Leu Val Gly Ile Ser Ser  
260 265 270

Gly Ala Ala Ala Ala Ala Ala Leu Lys Val Ala Lys Arg Pro Glu Asn  
275 280 285

Ala Gly Lys Leu Ile Val Val Val Phe Pro Ser Gly Gly Glu Arg Tyr  
290 295 300

Leu Ser Thr Lys Leu Phe Asp Ser Ile Arg Tyr Glu Ala Glu Asn Leu  
305 310 315 320

Pro Ile Glu

<210> 2205

<211> 1122

<212> DNA

<213> Arabidopsis thaliana

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tcacgagctt cctctgtttc accactccaa gcgtctcttc gtgagctcag agaccgtatc	180

gattcagtca aaaacactca aaagatcacc gaagctatga agcttgtcgc tgcagctaaa 240  
 gtcaggagag ctcaagaagc tgttgtcaat ggacgaccat tctcagaaac cctagtggaa 300  
 gttctttaca acatcaacga acagcttcaa accgatgatg tcgatgttcc cttaacaaaa 360  
 gtcagaccgg ttaagaaagt agctctcgtt gtcgtcaccg gtgatcgtgg attatgtggg 420  
 ggattcaaca atttcatcat taagaaagca gaggcaagaa tcaaagagct taaagggtcta 480  
 ggtcttgaat acacagtcata tagcgtgggc aagaagggaa attcttattt cctccgtcgc 540  
 ccgtacatcc ccgtcgacaa atacctagaa gccggaactt tacctacggc taaagaagct 600  
 caagctgtgg ctgatgatgt ctctctctg tttataagtg aagaagtcga caaagtcgag 660  
 ctctgtgata caaagtttgt ctcttgggtc aaatcagaac ccgtgatcca cagctactg 720  
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 gatctcaaga aatcgctttc gatggtgtat aatagaaagc gtcaagctaa gattactgga 1080  
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<210> 2206

<211> 373

<212> PRT

<213> Arabidopsis thaliana

<400> 2206

Met Ala Cys Ser Asn Leu Thr Thr Met Trp Val Ser Ser Lys Pro Ser  
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Leu Ser Ala Asp Ser Ser Ser Leu Ser Phe Arg Ser Val Leu Lys Cys  
20 25 30

Pro Thr Asn Thr Ser Ser Pro Pro Ser Arg Ala Ser Ser Val Ser Pro  
35 40 45

Leu Gln Ala Ser Leu Arg Glu Leu Arg Asp Arg Ile Asp Ser Val Lys  
50 55 60

Asn Thr Gln Lys Ile Thr Glu Ala Met Lys Leu Val Ala Ala Ala Lys  
65 70 75 80

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Val Arg Arg Ala Gln Glu Ala Val Val Asn Gly Arg Pro Phe Ser Glu  
85 90 95

Thr Leu Val Glu Val Leu Tyr Asn Ile Asn Glu Gln Leu Gln Thr Asp  
100 105 110

Asp Val Asp Val Pro Leu Thr Lys Val Arg Pro Val Lys Lys Val Ala  
115 120 125

Leu Val Val Val Thr Gly Asp Arg Gly Leu Cys Gly Gly Phe Asn Asn  
130 135 140

Phe Ile Ile Lys Lys Ala Glu Ala Arg Ile Lys Glu Leu Lys Gly Leu  
145 150 155 160

Gly Leu Glu Tyr Thr Val Ile Ser Val Gly Lys Lys Gly Asn Ser Tyr  
165 170 175

Phe Leu Arg Arg Pro Tyr Ile Pro Val Asp Lys Tyr Leu Glu Ala Gly  
180 185 190

Thr Leu Pro Thr Ala Lys Glu Ala Gln Ala Val Ala Asp Asp Val Phe  
195 200 205

Ser Leu Phe Ile Ser Glu Glu Val Asp Lys Val Glu Leu Leu Tyr Thr  
210 215 220

Lys Phe Val Ser Leu Val Lys Ser Glu Pro Val Ile His Thr Leu Leu  
225 230 235 240

Pro Leu Ser Pro Lys Gly Glu Ile Cys Asp Ile Asn Gly Thr Cys Val  
245 250 255

Asp Ala Ala Glu Asp Glu Phe Phe Arg Leu Thr Thr Lys Glu Gly Lys  
260 265 270

Leu Thr Val Glu Arg Glu Thr Phe Arg Thr Pro Thr Ala Asp Phe Ser  
275 280 285

Pro Ile Leu Gln Phe Glu Gln Asp Pro Val Gln Ile Leu Asp Ala Leu  
290 295 300

Leu Pro Leu Tyr Leu Asn Ser Gln Ile Leu Arg Ala Leu Gln Glu Ser  
305 310 315 320

Leu Ala Ser Glu Leu Ala Ala Arg Met Ser Ala Met Ser Ser Ala Ser  
3177

Asp Asn Ala Ser Asp Leu Lys Lys Ser Leu Ser Met Val Tyr Asn Arg  
340 345 350

Lys Arg Gln Ala Lys Ile Thr Gly Glu Ile Leu Glu Ile Val Ala Gly  
355 360 365

Ala Asn Ala Gln Val  
370

<210> 2207

<211> 453

<212> DNA

<213> Arabidopsis thaliana

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attcatgtta ctgatttgtc tggctgtgaa actcttgtcc gtatcaccgg tggaaatgaag 180  
gtgaaagctg atagagatga gtcctcacct tacgcagcta tgcttgagc acaggatgtt 240  
gtcagcgat gcaaggaact tggatcact gccatgcatg tgaagctccg tgccacaggt 300  
ggaacaaga ccaagacacc tggctcctgga gcacagtctg cccttagagc ccttgctcgt 360  
tccggcatga aaataggcgg tattgaggat gttactccca tcccaacaga cagtaccgcg 420  
agaaagggtg gtagaagagg aagaaggctc tga 453

<210> 2208

<211> 150

<212> PRT

<213> Arabidopsis thaliana

<400> 2208

Met Ser Lys Arg Lys Thr Lys Glu Pro Lys Val Asp Val Val Thr Leu  
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Gly Pro Ser Val Arg Glu Gly Glu Gln Val Phe Gly Val Val His Ile  
20 25 30



Phe Ala Ser Phe Asn Asp Thr Phe Ile His Val Thr Asp Leu Ser Gly  
 35 40 45

Arg Glu Thr Leu Val Arg Ile Thr Gly Gly Met Lys Val Lys Ala Asp  
 50 55 60

Arg Asp Glu Ser Ser Pro Tyr Ala Ala Met Leu Ala Ala Gln Asp Val  
 65 70 75 80

Ala Gln Arg Cys Lys Glu Leu Gly Ile Thr Ala Met His Val Lys Leu  
 85 90 95

Arg Ala Thr Gly Gly Asn Lys Thr Lys Thr Pro Gly Pro Gly Ala Gln  
 100 105 110

Ser Ala Leu Arg Ala Leu Ala Arg Ser Gly Met Lys Ile Gly Arg Ile  
 115 120 125

Glu Asp Val Thr Pro Ile Pro Thr Asp Ser Thr Arg Arg Lys Gly Gly  
 130 135 140

Arg Arg Gly Arg Arg Leu  
 145 150

<210> 2209

<211> 645

<212> DNA

<213> Arabidopsis thaliana

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 caagttccta agtccattac ttgcattaac cgcttagaga tatcgcgtat agcaccatta 180  
 cacgcaacga tgaatagccc gaaaggattt ggacctctc ctaagaaaac caagaagtcg 240  
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 ataagcagaa tgggatttac agtgggggta ccactcttca ttggctttt gtcttccca 420  
 ttcttttact atctcaaagt gggattgaaa gttgatgtgc ctacatgggt tccgtttatt 480  
 gtttcgttcg tcttcttgg tacggcttta gctgggtgta gctatgggat cgtgtcttcg 540  
 agctgggatc cggttagaga aggttccttg ttaggctgga acgaagctaa gaagaactcg 600

cctgtctttt ggcagtcctt ttggaattcc tcagacaaga gatag

645

&lt;210&gt; 2210

&lt;211&gt; 214

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2210

Met Ala Ser Val 5 Pro Cys Ser Phe Lys 10 Leu Ser Ala His Arg 15 Arg Ser

Ser Ser Lys 20 Leu Asp Gly Asn Asn 25 Lys Gln Cys Ser Ser 30 Leu Val Glu

Arg Leu 35 Arg Asp Lys Thr Lys 40 Ser Gln Val Pro Lys 45 Ser Ile Thr Cys

Ile Asn 50 Arg Leu Glu Ile 55 Ser Arg Ile Ala Pro 60 Leu His Ala Thr Met

Asn Ser Pro Lys Gly 70 Phe Gly Pro Pro Pro 75 Lys Lys Thr Lys Lys 80 Ser

Lys Lys Pro Lys 85 Pro Gly Asn Gln Ser 90 Asp Glu Asp Asp Asp 95 Asp Glu

Asp Glu Asp 100 Asp Asp Glu Glu 105 Asp Glu Arg Glu Arg 110 Gly Val Ile

Pro Glu 115 Ile Val Thr Asn Arg Met 120 Ile Ser Arg Met 125 Gly Phe Thr Val

Gly Leu 130 Pro Leu Phe Ile 135 Gly Leu Leu Phe Phe 140 Pro Phe Phe Tyr Tyr

Leu Lys Val Gly Leu 150 Lys Val Asp Val Pro 155 Thr Trp Val Pro Phe 160 Ile

Val Ser Phe Val 165 Phe Phe Gly Thr Ala 170 Leu Ala Gly Val Ser 175 Tyr Gly

Ile Val Ser 180 Ser Trp Asp Pro 185 Leu Arg Glu Gly Ser 190 Leu Leu Gly

Trp Asn Glu Ala Lys Lys Asn Trp Pro Val Phe Trp Gln Ser Phe Trp  
 195 200 205

Asn Ser Ser Asp Lys Arg  
 210

<210> 2211

<211> 1857

<212> DNA

<213> *Arabidopsis thaliana*

<400> 2211

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gaaagactta tcccatttgt tgcccttgat gtcagcagtg atagagtgc tatcgggcgt 1380  
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 gaagcaagcg gaagctctct aggctatggg tactctagga cgagtaagcc taaacctcaa 1800  
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<210> 2212

<211> 618

<212> PRT

<213> *Arabidopsis thaliana*

<400> 2212

Met Ile Pro His Gln Glu Val Asn Glu Glu Glu Ala Ser Leu Phe Asp  
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Phe Leu Trp Leu Leu Leu Ala Ser Val Ile Phe Val Pro Leu Phe Gln  
 20 25 30

Lys Ile Pro Gly Gly Ser Pro Val Leu Gly Tyr Leu Ala Ala Gly Ile  
 35 40 45

Leu Ile Gly Pro Tyr Gly Leu Ser Ile Ile Arg Asn Val His Gly Thr  
 50 55 60

Arg Ala Ile Ala Glu Phe Gly Val Val Phe Leu Leu Phe Asn Ile Gly  
 65 70 75 80

Leu Glu Leu Ser Val Glu Arg Leu Ser Ser Met Lys Lys Tyr Val Phe  
 85 90 95

Gly Leu Gly Ser Ala Gln Val Leu Val Thr Ala Ala Val Val Gly Leu  
 100 105 110

Leu Ala His Tyr Val Ala Gly Gln Ala Gly Pro Ala Ala Ile Val Ile  
 115 120 125

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Gly Asn Gly Leu Ala Leu Ser Ser Thr Ala Val Val Leu Gln Val Leu  
130 135 140

Gln Glu Arg Gly Glu Ser Thr Ser Arg His Gly Arg Ala Ser Phe Ser  
145 150 155 160

Val Leu Leu Phe Gln Asp Leu Ala Val Val Val Leu Leu Ile Leu Ile  
165 170 175

Pro Leu Ile Ser Pro Asn Ser Ser Lys Gly Gly Ile Gly Phe Gln Ala  
180 185 190

Ile Ala Glu Ala Leu Gly Leu Ala Ala Val Lys Ala Ala Val Ala Ile  
195 200 205

Thr Ala Ile Ile Ala Gly Gly Arg Leu Leu Leu Arg Pro Ile Tyr Lys  
210 215 220

Gln Ile Ala Glu Asn Arg Asn Ala Glu Ile Phe Ser Ala Asn Thr Leu  
225 230 235 240

Leu Val Ile Leu Gly Thr Ser Leu Leu Thr Ala Arg Ala Gly Leu Ser  
245 250 255

Met Ala Leu Gly Ala Phe Leu Ala Gly Leu Leu Leu Ala Glu Thr Glu  
260 265 270

Phe Ser Leu Gln Val Glu Ser Asp Ile Ala Pro Tyr Arg Gly Leu Leu  
275 280 285

Leu Gly Leu Phe Phe Met Thr Val Gly Met Ser Ile Asp Pro Lys Leu  
290 295 300

Leu Leu Ser Asn Phe Pro Val Ile Val Gly Thr Leu Gly Leu Leu Ile  
305 310 315 320

Val Gly Lys Thr Met Leu Val Val Ile Met Gly Lys Leu Phe Gly Ile  
325 330 335

Ser Ile Ile Ser Ala Ile Arg Val Gly Leu Leu Leu Ala Pro Gly Gly  
340 345 350

Glu Phe Ala Phe Val Ala Phe Gly Glu Ala Val Asn Gln Gly Ile Met  
355 360 365

Ser Pro Gln Leu Ser Ser Leu Leu Phe Leu Val Val Gly Ile Ser Met  
370 375 380

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 385 390 395 400  
 Phe Glu Leu His Asp Val Arg Ser Leu Leu Pro Val Glu Ser Glu Thr  
 405 410 415  
 Asp Asp Leu Gln Gly His Ile Ile Ile Cys Gly Phe Gly Arg Val Gly  
 420 425  
 Gln Ile Ile Ala Gln Leu Leu Ser Glu Arg Leu Ile Pro Phe Val Ala  
 435 440 445  
 Leu Asp Val Ser Ser Asp Arg Val Thr Ile Gly Arg Ser Leu Asp Leu  
 450 455 460  
 Pro Val Tyr Phe Gly Asp Ala Gly Ser Lys Glu Val Leu His Lys Ile  
 465 470 475 480  
 Gly Ala Gly Arg Ala Cys Ala Ala Val Val Ala Leu Asp Ala Pro Gly  
 485 490 495  
 Ala Asn Tyr Arg Cys Val Trp Ala Leu Ser Lys Phe Tyr Pro Asn Val  
 500 505 510  
 Lys Thr Phe Val Arg Ala His Asp Val Val His Gly Leu Asn Leu Glu  
 515 520 525  
 Lys Ala Gly Ala Thr Ala Val Val Pro Glu Thr Leu Glu Pro Ser Leu  
 530 535 540  
 Gln Leu Ala Ala Ala Val Leu Ala Gln Ala Lys Leu Pro Thr Ser Glu  
 545 550 555 560  
 Ile Ala Asn Thr Ile Asn Glu Phe Arg Thr Arg His Leu Ser Glu Leu  
 565 570 575  
 Thr Glu Leu Cys Glu Ala Ser Gly Ser Ser Leu Gly Tyr Gly Tyr Ser  
 580 585 590  
 Arg Thr Ser Lys Pro Lys Pro Gln Pro Ser Asp Ala Ser Gly Asp Asn  
 595 600 605  
 Gln Ile Ile Glu Gly Gly Thr Val Val Ile  
 610 615

&lt;210&gt; 2213

&lt;211&gt; 1584

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2213

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agtgaactaa actggctcca atgccttctt tgctacgact gtttccatca aaacggatag      600
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gacaaagatt tgctgaacca cacaaatctg aacttcactt cttttgtgaa cgggaaggag     1080
aattcagtg agacatttta ctatatacag atcaaatcca ttctagtctg cggcaaaagt     1140
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gattctggtg caaccttaag ctatttcgca gaacctgcat atgagatcat caaaaaaag     1260
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tgcttaaatg tatctggcat agaggagaac aacatccacc tacctgagct cgggattgca     1380
tttgtagagc gcacagtttg gaatttcctt gctgagaact ccttcatttg gttgagcgag     1440
gatttggttt gcttggcaat tctaggaact ccaaaatcta ccttctcgat catcggaaac     1500
taccagcaac agaatttcca tatactctat gatacaaaga ggtctaggct aggggtcaca     1560
ccccaaaagt gtgcggacat ataa

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&lt;210&gt; 2214

&lt;211&gt; 527

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2214

Met Ser Thr Lys Leu Ser Ile Phe Leu Leu Gly Leu Ile Leu Phe Ser  
 1 5 10 15

Val Ser Pro Phe Ser Gly Asp Cys Arg Thr Leu Ser Gly Lys His Glu  
 20 25 30

His Tyr Ser Ser Ser Leu Asn Met Phe Asn Ser Gln Asp Thr Met Arg  
 35 40 45

Phe Ser Ser Ala Ser Ser Ser Thr Ser Asn Asp Cys Gly Phe Ser Ser  
 50 55 60

Lys Glu His Asp Pro Ser Lys Glu His Thr Arg Glu Ser Val Lys Pro  
 65 70 75 80

Gln Ser Arg Ile Lys Gln Glu Thr Lys Arg Thr Thr His Ser Val Val  
 85 90 95

Asp Leu Gln Ile Gln Asp Leu Thr Arg Ile Lys Thr Leu His Ala Arg  
 100 105 110

Phe Asn Lys Ser Lys Lys Gln Lys Asn Glu Lys Val Arg Lys Lys Ile  
 115 120 125

Thr Ser Asp Ile Ser Leu Val Gly Ala Pro Glu Val Ser Pro Gly Lys  
 130 135 140

Leu Ile Ala Thr Leu Glu Ser Gly Met Thr Leu Gly Ser Gly Glu Tyr  
 145 150 155 160

Phe Met Asp Val Leu Val Gly Thr Pro Pro Lys His Phe Ser Leu Ile  
 165 170 175

Leu Asp Thr Gly Ser Asp Leu Asn Trp Leu Gln Cys Leu Pro Cys Tyr  
 180 185 190

Asp Cys Phe His Gln Asn Gly Met Phe Tyr Asp Pro Lys Thr Ser Ala  
 195 200 205



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Ser Phe Lys Asn Ile Thr Cys Asn Asp Pro Arg Cys Ser Leu Ile Ser  
210 215 220

Ser Pro Asp Pro Pro Val Gln Cys Glu Ser Asp Asn Gln Ser Cys Pro  
225 230 235 240

Tyr Phe Tyr Trp Tyr Gly Asp Arg Ser Asn Thr Thr Gly Asp Phe Ala  
245 250 255

Val Glu Thr Phe Thr Val Asn Leu Thr Thr Thr Glu Gly Gly Ser Ser  
260 265 270

Glu Tyr Lys Val Gly Asn Met Met Phe Gly Cys Gly His Trp Asn Arg  
275 280 285

Gly Leu Phe Ser Gly Ala Ser Gly Leu Leu Gly Leu Gly Arg Gly Pro  
290 295 300

Leu Ser Phe Ser Ser Gln Leu Gln Ser Leu Tyr Gly His Ser Phe Ser  
305 310 315 320

Tyr Cys Leu Val Asp Arg Asn Ser Asn Thr Asn Val Ser Ser Lys Leu  
325 330 335

Ile Phe Gly Glu Asp Lys Asp Leu Leu Asn His Thr Asn Leu Asn Phe  
340 345 350

Thr Ser Phe Val Asn Gly Lys Glu Asn Ser Val Glu Thr Phe Tyr Tyr  
355 360 365

Ile Gln Ile Lys Ser Ile Leu Val Gly Gly Lys Ala Leu Asp Ile Pro  
370 375 380

Glu Glu Thr Trp Asn Ile Ser Ser Asp Gly Asp Gly Gly Thr Ile Ile  
385 390 395 400

Asp Ser Gly Thr Thr Leu Ser Tyr Phe Ala Glu Pro Ala Tyr Glu Ile  
405 410 415

Ile Lys Asn Lys Phe Ala Glu Lys Met Lys Glu Asn Tyr Pro Ile Phe  
420 425 430

Arg Asp Phe Pro Val Leu Asp Pro Cys Phe Asn Val Ser Gly Ile Glu  
435 440 445

Glu Asn Asn Ile His Leu Pro Glu Leu Gly Ile Ala Phe Val Asp Gly  
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450

455

Thr Val Trp Asn Phe Pro Ala Glu Asn Ser Phe Ile Trp Leu Ser Glu  
465 470 475 480

Asp Leu Val Cys Leu Ala Ile Leu Gly Thr Pro Lys Ser Thr Phe Ser  
485 490 495

Ile Ile Gly Asn Tyr Gln Gln Gln Asn Phe His Ile Leu Tyr Asp Thr  
500 505 510

Lys Arg Ser Arg Leu Gly Phe Thr Pro Thr Lys Cys Ala Asp Ile  
515 520 525

&lt;210&gt; 2215

&lt;211&gt; 1575

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

<400> 2215  
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aattacatgg attatttggc cgctggtttc ttggttttga cgcccggaat acttctccgt 120  
ccatggctct ggttacgtct acgaaactcg aaaacgaaag atggagatga agaagaagat 180  
aatgaggaga agaagaaggg aatgattcca aacggaagct taggctggcc ggtgatcgga 240  
gaaaccttaa acttcatcgc ttgtggttat tcttctcggc ctgttacctt catggacaaa 300  
cgaaagtctt tatacgggaa agtgttcaaa acgaacataa tagggacacc aatcataata 360  
tcaaccgatg cagaggtgaa taaagtgggt ctccaaaacc atgggaacac atttgtccct 420  
gcatacccta aatcaattac ggaactactt ggagaaaact ctattctcag catcaatgga 480  
cctcatcaaa aaaggcttca cacgctcatt ggcgcgttcc tcagatctcc tcacctcaaa 540  
gaccggatca ctgcagacat tgaggcctcg gttgtttcca ctttggcgtc ttgggctcaa 600  
cttcatttgg ttcatgttca ggatgagatc aaaaagatga cgtttgagat attagtaaaa 660  
gtgttgatga gcacatctcc tggtgaagat atgaacattc tcaaaactga gttcgaagaa 720  
ttcatcaaag gtttgatttg tatcccaatc aaattccctg gcactagact ctacaaatcc 780  
ttaaaggcga aagagaggtt aataaagatg gtaaaaaagg ttgtggagga gagacaagtg 840  
gcatgacaaa cgacgtctcc ggcacaaatgac gtggtggacg tacttctaag agacggtggt 900  
gattcagaga agcaatctca accgtcagat ttcgtcagcg gaaagatcgt agagatgatg 960  
ataccgggag aggaacaat gccaacggcg atgaccttgg ctgtcaaatt cttaagtgc 1020  
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aaccccgtcg ctctagccaa actcgtggag gagaatatgg agatgaagag gcgtaaattg 1080  
gaattgggag aagaatacaa gtggaccgat tatatgtctc tctcttttac tcaaaatgtg 1140  
ataaacgaaa cgcttagaat ggctaacatt attaacgggg tgtggaggaa agctctcaag 1200  
gatgtagaaa ttaaaggtta cttaataccg aaaggatggt gtgtattggc atcattcata 1260  
tcggttcaca tggatgaaga catttatgat aatccctatc aattcgcgtc gtggagatgg 1320  
gacagaatta atggatcgcc aaacagcagt atttgcttca caccctttgg tgggtgggcaa 1380  
aggctatgtc ctggtttaga gctgtcgaag ctgaaaatat ccattcttct tcaccacctt 1440  
gtaaccgggt acagttggac ggctgaggaa gacgagatag tgcatttcc gactgtgaag 1500  
atgaagcgga ggctcccgat ccgagtggct actgtagatg atagtgttc tccgatctca 1560  
cttgaagatc attaa 1575

<210> 2216

<211> 524

<212> PRT

<213> Arabidopsis thaliana

<400> 2216

Met Gln Pro Pro Ala Ser Ala Gly Leu Phe Arg Ser Pro Glu Asn Leu  
1 5 10 15

Pro Trp Pro Tyr Asn Tyr Met Asp Tyr Leu Val Ala Gly Phe Leu Val  
20 25 30

Leu Thr Ala Gly Ile Leu Leu Arg Pro Trp Leu Trp Leu Arg Leu Arg  
35 40 45

Asn Ser Lys Thr Lys Asp Gly Asp Glu Glu Glu Asp Asn Glu Glu Lys  
50 55 60

Lys Lys Gly Met Ile Pro Asn Gly Ser Leu Gly Trp Pro Val Ile Gly  
65 70 75 80

Glu Thr Leu Asn Phe Ile Ala Cys Gly Tyr Ser Ser Arg Pro Val Thr  
85 90 95

Phe Met Asp Lys Arg Lys Ser Leu Tyr Gly Lys Val Phe Lys Thr Asn  
100 105 110

Ile Ile Gly Thr Pro Ile Ile Ile Ser Thr Asp Ala Glu Val Asn Lys  
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115 120 047-E2F-PCT.ST25.txt 125

Val Val Leu Gln Asn His Gly Asn Thr Phe Val Pro Ala Tyr Pro Lys  
130 135

Ser Ile Thr Glu Leu Leu Gly Glu Asn Ser Ile Leu Ser Ile Asn Gly  
145 150 155 160

Pro His Gln Lys Arg Leu His Thr Leu Ile Gly Ala Phe Leu Arg Ser  
165 170 175

Pro His Leu Lys Asp Arg Ile Thr Arg Asp Ile Glu Ala Ser Val Val  
180 185 190

Leu Thr Leu Ala Ser Trp Ala Gln Leu Pro Leu Val His Val Gln Asp  
195 200 205

Glu Ile Lys Lys Met Thr Phe Glu Ile Leu Val Lys Val Leu Met Ser  
210 215 220

Thr Ser Pro Gly Glu Asp Met Asn Ile Leu Lys Leu Glu Phe Glu Glu  
225 230 235 240

Phe Ile Lys Gly Leu Ile Cys Ile Pro Ile Lys Phe Pro Gly Thr Arg  
245 250 255

Leu Tyr Lys Ser Leu Lys Ala Lys Glu Arg Leu Ile Lys Met Val Lys  
260 265 270

Lys Val Val Glu Glu Arg Gln Val Ala Met Thr Thr Thr Ser Pro Ala  
275 280 285

Asn Asp Val Val Asp Val Leu Leu Arg Asp Gly Gly Asp Ser Glu Lys  
290 295 300

Gln Ser Gln Pro Ser Asp Phe Val Ser Gly Lys Ile Val Glu Met Met  
305 310 315 320

Ile Pro Gly Glu Glu Thr Met Pro Thr Ala Met Thr Leu Ala Val Lys  
325 330 335

Phe Leu Ser Asp Asn Pro Val Ala Leu Ala Lys Leu Val Glu Glu Asn  
340 345 350

Met Glu Met Lys Arg Arg Lys Leu Glu Leu Gly Glu Glu Tyr Lys Trp  
355 360 365

Thr Asp Tyr Met Ser Leu Ser Phe Thr Gln Asn Val Ile Asn Glu Thr  
 370 375 380

Leu Arg Met Ala Asn Ile Ile Asn Gly Val Trp Arg Lys Ala Leu Lys  
 385 390 395 400

Asp Val Glu Ile Lys Gly Tyr Leu Ile Pro Lys Gly Trp Cys Val Leu  
 405 410 415

Ala Ser Phe Ile Ser Val His Met Asp Glu Asp Ile Tyr Asp Asn Pro  
 420 425 430

Tyr Gln Phe Asp Pro Trp Arg Trp Asp Arg Ile Asn Gly Ser Ala Asn  
 435 440 445

Ser Ser Ile Cys Phe Thr Pro Phe Gly Gly Gly Gln Arg Leu Cys Pro  
 450 455 460

Gly Leu Glu Leu Ser Lys Leu Glu Ile Ser Ile Phe Leu His His Leu  
 465 470 475 480

Val Thr Arg Tyr Ser Trp Thr Ala Glu Glu Asp Glu Ile Val Ser Phe  
 485 490 495

Pro Thr Val Lys Met Lys Arg Arg Leu Pro Ile Arg Val Ala Thr Val  
 500 505 510

Asp Asp Ser Ala Ser Pro Ile Ser Leu Glu Asp His  
 515 520

<210> 2217

<211> 456

<212> DNA

<213> Arabidopsis thaliana

<400> 2217  
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 tacaagcggg ggaggagtga gaaccacctc tccccgacg ccatcgcca ccacatcaa 120  
 ggtgtcacca tccacgacgg tgaatgggac tcccatggag ccatcaagat ttggaactac 180  
 acatgcgatg ggaaccgga ggtgttcaag gagaggagag agatagacga tgagaatatg 240  
 gcggtaacgt tcagaggact cgaaggtcac gtgatggagc agcttaaagt gtatgacgtc 300  
 atctttcagt tcattcaaaa gtcacctgat gatcatctc gtaagatcac tatgatctgg 360

gagaagcaaa acgatgacat gcctgagccc agcaactaca tgaagttcgt caagagcctc 420  
gctgctgaca tggatgatca cgttctcaaa gcctaa 456

<210> 2218

<211> 151

<212> PRT

<213> Arabidopsis thaliana

<400> 2218

Met Ala Thr Ser Gly Thr Tyr Val Thr Glu Val Pro Leu Lys Gly Ser  
1 5 10 15

Ala Glu Lys His Tyr Lys Arg Trp Arg Ser Glu Asn His Leu Phe Pro  
20 25 30

Asp Ala Ile Gly His His Ile Gln Gly Val Thr Ile His Asp Gly Glu  
35 40 45

Trp Asp Ser His Gly Ala Ile Lys Ile Trp Asn Tyr Thr Cys Asp Gly  
50 55 60

Lys Pro Glu Val Phe Lys Glu Arg Arg Glu Ile Asp Asp Glu Asn Met  
65 70 75 80

Ala Val Thr Phe Arg Gly Leu Glu Gly His Val Met Glu Gln Leu Lys  
85 90 95

Val Tyr Asp Val Ile Phe Gln Phe Ile Gln Lys Ser Pro Asp Asp Ile  
100 105 110

Ile Cys Lys Ile Thr Met Ile Trp Glu Lys Gln Asn Asp Asp Met Pro  
115 120 125

Glu Pro Ser Asn Tyr Met Lys Phe Val Lys Ser Leu Ala Ala Asp Met  
130 135 140

Asp Asp His Val Leu Lys Ala  
145 150

<210> 2219

<211> 483

<212> DNA

<213> *Arabidopsis thaliana*

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<400> 2219
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acacagtcac ctacagaatc caactctttc tctctgcttg gcggagcgtg cgtttcacgc    120
gtagagatag taggcacaat cgtctctcgt gatctgacct caaagtttct caagttcggc    180
gtcgacgatg gcaccggctg cgtcacgtgc gtcattgtgg tcaaccaact cactcttctt    240
tactttctcc ggtgggattc agccacgatt ctgctgctcg caagtgccgc gcggaacaa    300
gccgcacaaa tcagaatcgg agccgtggct cgcgttcgcg gccgcgtcgg ctctacaga    360
ggagtgatgc agatcacggc taatgtggcg gtggccgaga gagacccgaa cgcggagatc    420
ttgcactggt tggagtgttt aaagcttggt caaagtgttt atcgtgttcg tattcaaagt    480
taa                                                                    483

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&lt;210&gt; 2220

&lt;211&gt; 160

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2220

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Met Asp Arg Ser Leu Gln Ser Thr His Ala Lys Leu Val Ala Arg Asp
1          5          10
Ile Gln Arg Leu Thr Gln Ser Pro Thr Glu Ser Asn Ser Phe Ser Leu
20        25
Leu Gly Gly Ala Cys Val Ser Arg Val Glu Ile Val Gly Thr Ile Val
35        40        45
Ser Arg Asp Leu Thr Pro Lys Phe Leu Lys Phe Gly Val Asp Asp Gly
50        55        60
Thr Gly Cys Val Thr Cys Val Met Trp Leu Asn Gln Leu Thr Ser Ser
65        70        75
Tyr Phe Ser Arg Trp Asp Pro Ala Thr Ile Leu Leu Leu Ala Ser Ala
85        90        95
Ala Arg Lys Gln Ala Ala Gln Ile Arg Ile Gly Ala Val Ala Arg Val
100       105       110

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Arg Gly Arg Val Gly Ser Tyr Arg Gly Val Met Gln Ile Thr Ala Asn  
115 120 125

Val Ala Val Ala Glu Arg Asp Pro Asn Ala Glu Ile Leu His Trp Leu  
130 135 140

Glu Cys Leu Lys Leu Gly Gln Ser Cys Tyr Arg Val Arg Ile Gln Ser  
145 150 155 160

<210> 2221

<211> 1596

<212> DNA

<213> Arabidopsis thaliana

<400> 2221  
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gatgtcgaat ttgaaatcc gtcgcatgg gaggaccagc agcagcagaa ctacaagggtg 120  
aagctcatgt gcagctatgg cggcaagatc cagcctcgtc cacacgataa ccagcttact 180  
tatgtaaacg gcgataccaa aatcatgtcg gtcgatcgtg gtatcagatt tccggcttta 240  
gtatcgaagc tctccgccgt ctgcagcggg ggtgggtgatg gaggagaaat ctcggtcaag 300  
tatcagcttc cagggtgaaga tctagatgcg ttgatttcgg tgactaatga tgaggatctg 360  
gagcacatga tgcatgagta cgatcggttg cttcgtttgt ctactaaacc agctaggatg 420  
cgtttgtttc tcttcccgct tcttcccatt tccggcggat ttggctccga aggttcgact 480  
aaatcggtac gggatacgct taatccaatc cctagccgac ctgaatcggg gaaatctgta 540  
accgctcctc cgaataatgc tgatttcttg ttggatcgg agaaagtagc tccaattccg 600  
ccgtcgccag tgaaggttcc tcaaccggta ccggaaccag tgggtcttga accgccgacg 660  
atgttcgtag atcaacggat gttacaaccg gaacacggcg taaatccggc ggagattcaa 720  
agacaaatcc aggaatttca gatgattcaa atcagagacc aagagcaaca aatgcttcat 780  
cagaatcagc tacatcaaca acaacaacaa caagaggcta tacatcaaaa tcagcttcat 840  
caccaacaag aggttatata tcagaatcag ctgcttcaac aagaggctat acatcagaat 900  
cagatgcttc aacaacaaca acaacaagag gctatgtaca gaagaaaac cgaagacgaa 960  
gccggaagat acttcctcc cacatacact caaaatccgg cgcgggtgac gaatcaacaa 1020  
cctccggttg gctactggca aggaacacc aacaacagta atattcaggg gaatatctac 1080  
acaacaacgt cacagaatct accggagcaa caacaacaac aacaacaagt atacatgatt 1140  
ccagctcaat ctcaagctcc agggacatta taccaaagcg tcatgagacc aacggtacaa 1200



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ggaaccaag gttattacc atcacctgtt cagcgacttc atcatcctga tgcatacatg 1260  
 gaacagcaga accagccagg ttacaacgtg gttcaaccac agccaacgtt ttcagggtgt 1320  
 ccacaagtta tgactagtgt tgggtcccaa gttatgacta gtgtcgggcc tccaatgggg 1380  
 ttacaggaac cttattcaca gatggggaag cctgtgtact atacggtggc tggagaaggc 1440  
 atgatggttc aaccgccacc agcccagcct cagcagcagc agcagcagta ccagggaatg 1500  
 ggtaaccgg ttatgtggcat gaccgatctc agaaccggac cggatgggaa agtggcggtt 1560  
 aacatggctg caccacaagt ttcagattcg gtgtga 1596

<210> 2222

<211> 531

<212> PRT

<213> Arabidopsis thaliana

<400> 2222

Met Asp Lys Phe Ser Tyr Asn Ser Tyr Pro Asp Ser Ala Glu Ser Ser  
 1 5 10 15

Pro Arg Ser Arg Asp Val Glu Phe Glu Asn Pro Ser Pro Trp Glu Asp  
 20 25 30

Gln Gln Gln Gln Asn Tyr Lys Val Lys Leu Met Cys Ser Tyr Gly Gly  
 35 40 45

Lys Ile Gln Pro Arg Pro His Asp Asn Gln Leu Thr Tyr Val Asn Gly  
 50 55 60

Asp Thr Lys Ile Met Ser Val Asp Arg Gly Ile Arg Phe Pro Ala Leu  
 65 70 75 80

Val Ser Lys Leu Ser Ala Val Cys Ser Gly Gly Asp Gly Gly Glu  
 85 90 95

Ile Ser Phe Lys Tyr Gln Leu Pro Gly Glu Asp Leu Asp Ala Leu Ile  
 100 105 110

Ser Val Thr Asn Asp Glu Asp Leu Glu His Met Met His Glu Tyr Asp  
 115 120 125

Arg Leu Leu Arg Leu Ser Thr Lys Pro Ala Arg Met Arg Leu Phe Leu  
 130 135 140

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Phe Pro Ser Ser Pro Ile Ser Gly Gly Phe Gly Ser Thr  
 145 150 155 160  
 Lys Ser Asp Arg Asp Thr Leu Asn Pro Ile Pro Ser Arg Pro Glu Ser  
 165 170 175  
 Glu Lys Ser Val Thr Ala Pro Pro Asn Asn Ala Asp Phe Leu Phe Gly  
 180 185 190  
 Ser Glu Lys Val Ala Pro Ile Pro Pro Ser Pro Val Lys Val Pro Gln  
 195 200 205  
 Pro Val Pro Glu Pro Val Val Leu Glu Pro Pro Gln Met Phe Val Asp  
 210 215 220  
 Gln Arg Met Leu Gln Pro Glu His Gly Val Asn Pro Ala Glu Ile Gln  
 225 230 235 240  
 Arg Gln Ile Gln Glu Phe Gln Met Ile Gln Ile Arg Asp Gln Glu Gln  
 245 250 255  
 Gln Met Leu His Gln Asn Gln Leu His Gln Gln Gln Gln Gln Glu  
 260 265 270  
 Ala Ile His Gln Asn Gln Leu His His Gln Gln Glu Val Ile His Gln  
 275 280 285  
 Asn Gln Leu Leu Gln Gln Glu Ala Ile His Gln Asn Gln Met Leu Gln  
 290 295 300  
 Gln Gln Gln Gln Gln Glu Ala Met Tyr Arg Arg Lys Thr Glu Asp Glu  
 305 310 315 320  
 Ala Gly Arg Tyr Phe Pro Pro Thr Tyr Thr Gln Asn Pro Ala Pro Val  
 325 330 335  
 Thr Asn Gln Gln Pro Pro Val Gly Tyr Trp Gln Gly Asn Thr Asn Asn  
 340 345 350  
 Ser Asn Ile Gln Gly Asn Ile Tyr Thr Thr Thr Ser Gln Asn Leu Pro  
 355 360 365  
 Glu Gln Gln Gln Gln Gln Gln Gln Val Tyr Met Ile Pro Ala Gln Ser  
 370 375 380  
 Gln Ala Pro Gly Thr Leu Tyr Gln Ser Val Met Arg Pro Thr Val Gln  
 385 390 395 400

Gly Asn Gln Gly Tyr Tyr Pro Ser Pro Val Gln Arg Leu His His Pro  
 405 410 415  
 Asp Ala Tyr Met Glu Gln Gln Asn Gln Pro Gly Tyr Asn Val Val Gln  
 420 425 430  
 Pro Gln Pro Thr Phe Ser Gly Gly Pro Gln Val Met Thr Ser Val Gly  
 435 440 445  
 Pro Gln Val Met Thr Ser Val Gly Pro Pro Met Gly Leu Gln Glu Pro  
 450 455 460  
 Tyr Ser Gln Met Gly Lys Pro Val Tyr Tyr Thr Val Ala Gly Glu Gly  
 465 470 475 480  
 Met Met Val Gln Pro Pro Pro Ala Gln Pro Gln Gln Gln Gln Gln  
 485 490 495  
 Tyr Gln Gly Met Gly Gln Pro Val Ser Gly Met Thr Asp Leu Arg Thr  
 500 505 510  
 Gly Pro Asp Gly Lys Val Ala Val Asn Met Ala Ala Pro Gln Val Ser  
 515 520 525  
 Asp Ser Val  
 530

&lt;210&gt; 2223

&lt;211&gt; 1173

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2223

atggccatga gcatactcgc gaagatcttt ctcgtctttg ccatctattg cgctatcgat	60
cccttcagtc acagctccat ttccaagttc ccggatttca aaacttacaa gattgacatg	120
cctccggtat cgtcactttc aaaggagaga gaccgccaga atctgttgca gaattcagag	180
atcaggtttc ttaacgaggt tcaaggtccc gagagcattg ctttcgatcc gcaaggctcg	240
ggtccttata ccggagtcgc cgacggtcga attctctttt ggaatggcac tcgttgaca	300
gatttcgcat atacttcgaa caatcggtca gagctatgtg atcctaagcc atcgcttttg	360
gattacttaa aggatgaaga tatctgtggt cggccttttag gtcttcgatt cgacaagaaa	420

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aatggggatt tgtacattgc agatgcgtat ttggggataa tgaaagttgg tccggaagga 480
ggtttagcaa cttctgttac aaacgaggct gatggtgtgc ctttgagatt taccaatgat 540
cttgacattg atgatgaagg caatgtttac ttactgata gcagctcttt cttccaacga 600
aggaaattha tgcttttgat tgtctcgggg gaagacagtg ggagggtgtt gaaatacaat 660
ccaaaaacaa aggagactac cactctcgtg agaaatctcc agtttcctaa cggattatcc 720
ctcggcgaag acggctcctt ttcatcttt tgtgaaggat ctattggaag attacggaaa 780
tactggttga aaggggagaa agctggaacg tcagaagtg tagctctatt acatgggttc 840
ccagacaaca tccgcacaaa caaagatgga gatttctggg tggcgggtga ctgccacaga 900
aacatattca cacacttgat ggcgcattac ccgagggtga ggaagttctt tctgaagctg 960
ccgatatcag tgaagtttca gtacttgctg caggtagtg gttggcctca tgcgtagct 1020
gtgaagtaca gtgaagaagg gaaagtgcta aaggtgttg aagatagtaa agggaaagtg 1080
gtgaaggcag tgagtgaagt ggaggagaaa gatgggaagc ttgatggg aagtgtattg 1140
atgtccttca ttgccgtata tgacttcct tag 1173

```

&lt;210&gt; 2224

&lt;211&gt; 390

&lt;212&gt; PR1

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2224

```

Met Ala Met Ser Ile Leu Ala Lys Ile Phe Leu Val Phe Ala Ile Tyr
1      5      10      15

```

```

Cys Ala Ile Asp Pro Phe Ser His Ser Ser Ile Ser Lys Phe Pro Asp
20      25      30

```

```

Phe Lys Thr Tyr Lys Ile Asp Met Pro Pro Leu Ser Ser Leu Pro Lys
35      40      45

```

```

Glu Arg Asp Arg Gln Asn Leu Leu Gln Asn Ser Glu Ile Arg Phe Leu
50      55      60

```

```

Asn Glu Val Gln Gly Pro Glu Ser Ile Ala Phe Asp Pro Gln Gly Arg
65      70      75      80

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```

Gly Pro Tyr Thr Gly Val Ala Asp Gly Arg Ile Leu Phe Trp Asn Gly
85      90      95

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Thr Arg Trp Thr Asp Phe Ala Tyr Thr Ser Asn Asn Arg Ser Glu Leu  
100 105 110

Cys Asp Pro Lys Pro Ser Leu Leu Asp Tyr Leu Lys Asp Glu Asp Ile  
115 120 125

Cys Gly Arg Pro Leu Gly Leu Arg Phe Asp Lys Lys Asn Gly Asp Leu  
130 135 140

Tyr Ile Ala Asp Ala Tyr Leu Gly Ile Met Lys Val Gly Pro Glu Gly  
145 150 155 160

Gly Leu Ala Thr Ser Val Thr Asn Glu Ala Asp Gly Val Pro Leu Arg  
165 170 175

Phe Thr Asn Asp Leu Asp Ile Asp Asp Glu Gly Asn Val Tyr Phe Thr  
180 185 190

Asp Ser Ser Ser Phe Phe Gln Arg Arg Lys Phe Met Leu Leu Ile Val  
195 200 205

Ser Gly Glu Asp Ser Gly Arg Val Leu Lys Tyr Asn Pro Lys Thr Lys  
210 215 220

Glu Thr Thr Thr Leu Val Arg Asn Leu Gln Phe Pro Asn Gly Leu Ser  
225 230 235 240

Leu Gly Lys Asp Gly Ser Phe Phe Ile Phe Cys Glu Gly Ser Ile Gly  
245 250 255

Arg Leu Arg Lys Tyr Trp Leu Lys Gly Glu Lys Ala Gly Thr Ser Glu  
260 265 270

Val Val Ala Leu Leu His Gly Phe Pro Asp Asn Ile Arg Thr Asn Lys  
275 280 285

Asp Gly Asp Phe Trp Val Ala Val His Cys His Arg Asn Ile Phe Thr  
290 295 300

His Leu Met Ala His Tyr Pro Arg Val Arg Lys Phe Phe Leu Lys Leu  
305 310 315 320

Pro Ile Ser Val Lys Phe Gln Tyr Leu Leu Gln Val Gly Gly Trp Pro  
325 330 335

His Ala Val Ala Val Lys Tyr Ser Glu Glu Gly Lys Val Leu Lys Val  
340 345 350

047-E2F-PCT.ST25.txt

Leu Glu Asp Ser Lys Gly Lys Val Val Lys Ala Val Ser Glu Val Glu  
355 360

Glu Lys Asp Gly Lys Leu Trp Met Gly Ser Val Leu Met Ser Phe Ile  
370 375 380

Ala Val Tyr Asp Leu Pro  
385 390

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<211> 1200

<212> DNA

<213> Arabidopsis thaliana

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Page 3200

&lt;210&gt; 2226

&lt;211&gt; 399

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2226

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Met Glu Ala Tyr Glu Thr Ile Val Pro Leu Tyr Val Leu Gln Ala Phe  
 20 25 30

Gly Val Ser Val His Cys Val Ser Pro Gly Arg Lys Thr Gly Asp Lys  
 35 40 45

Cys Val Met Ala Ala His Asp Leu Leu Gly Leu Glu Ile Tyr Thr Glu  
 50 55 60

Leu Val Val Asp His Leu Thr Leu Asn Ala Asn Phe Asp Gly Val Ile  
 65 70 75 80

Pro Asp Gln Tyr Asp Ala Ile Ile Ile Pro Gly Gly Arg Phe Thr Glu  
 85 90 95

Leu Leu Ser Ala Asp Glu Lys Cys Val Ser Leu Val Ala Arg Phe Ala  
 100 105 110

Glu Leu Lys Lys Leu Ile Phe Thr Ser Cys His Ser Gln Leu Phe Leu  
 115 120 125

Ala Ala Ala Gly Leu Leu Thr Gly Gly Met Lys Cys Thr Ala Phe Glu  
 130 135 140

Ser Met Lys Pro Phe Ile Glu Leu Ser Gly Gly Ala Trp Trp Gln Gln  
 145 150 155 160

Pro Gly Val Gln Thr Leu Phe Glu Ile Thr Asp Cys Val Lys Asp Gly  
 165 170 175

Ser Phe Met Ser Thr Met Gly Trp Pro Thr Leu Gly His Ser Leu Lys  
 180 185 190

Val Leu Leu Glu Ser Leu Gly Ser Lys Ile Ser Ser Ser Lys Glu Asn  
 Page 3201

195 200 047-E2F-PCT.ST25.txt 205

His Gln Thr Ser Leu Leu Phe Leu Ile Gly Asp Cys Val Glu Asp Tyr  
 210 215

Ser Ile Asn Val Pro Phe Lys Ala Phe Gln Ala Leu Gly Cys Lys Val  
 225 230 235 240

Asp Ala Val Thr Pro Thr Lys Lys Arg Gly Glu Lys Cys Ala Thr Ile  
 245 250 255

Val His Asp Leu Glu Asp Gly Arg Gln Leu Pro Thr Glu Lys Phe Gly  
 260 265 270

His Asn Phe Tyr Val Thr Val Ala Trp Asp Asp Val Ser Val Asp Asp  
 275 280 285

Tyr Asp Cys Ile Val Val Pro Gly Gly Arg Ser Pro Glu Leu Leu Val  
 290 295 300

Met Asn Pro Lys Ala Val Glu Leu Val Arg Lys Phe Val Glu Lys Gly  
 305 310 315 320

Lys Phe Val Ala Ala Ile Gly Met Gly Asn Trp Leu Leu Ala Ala Thr  
 325 330 335

Gly Ala Leu Lys Lys Lys Arg Cys Ala Ser Ser Tyr Gly Thr Lys Val  
 340 345 350

Ala Val Lys Val Ala Gly Gly Glu Ile Val Glu Ser Glu Arg Cys Val  
 355 360 365

Thr Asp Asp Lys Leu Val Thr Ala Ala Ser Thr Ser Asp Leu Pro Ala  
 370 375 380

Phe Leu Tyr Ala Leu Ser Thr Ala Leu Gly Leu Ser Val Val Phe  
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<211> 1344

<212> DNA

<213> Arabidopsis thaliana

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agagctgata ctgatttcta ttctgtcctt ggagtctcga aaaatgcaac caaagctgag	300
attaaaagcg cttatcgga gctcgcctag agttatcatc cagatgtgaa caaggatgct	360
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gaagatgagt attactcact aatcttgaat ttcaagaag cggttttcgg tattgagaaa	660
gaaattgaga tatctcgggt agagagctgt gggacttgca atgggtctgg agctaaagcg	720
ggaaccaaac caacaaatg caaaacatgt ggcgggcaag gacaggtggt agcatcaacg	780
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gttttgaata agagcaagat gagaggtgat cagtttagta gagtgcgaagt tgagattcct	1260
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<210> 2228

<211> 447

<212> PR1

<213> Arabidopsis thaliana

<400> 2228

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Leu	Arg	Pro	Arg	Phe	Ala	Val	Lys	Ala	Phe	Tyr	Pro	Ser	Arg	Leu	Glu
Page 3203															

Ser His Gln Asp Asn Cys Ile Ser Gln Ile Asn Cys Leu Gly Ala Ser  
35 40 45

Arg Ser Ser Met Phe Ala Gln Gly Ser Leu Pro Phe Leu Ser Leu Thr  
50 55 60

Gly Val Ser Pro Asn Thr His Ser Arg Arg Gly Ala Arg Phe Thr Val  
65 70 75 80

Arg Ala Asp Thr Asp Phe Tyr Ser Val Leu Gly Val Ser Lys Asn Ala  
85 90 95

Thr Lys Ala Glu Ile Lys Ser Ala Tyr Arg Lys Leu Ala Arg Ser Tyr  
100 105 110

His Pro Asp Val Asn Lys Asp Ala Gly Ala Glu Asp Lys Phe Lys Glu  
115 120 125

Ile Ser Asn Ala Tyr Glu Ile Leu Ser Asp Asp Glu Lys Arg Ser Leu  
130 135 140

Tyr Asp Arg Tyr Gly Glu Ala Gly Val Lys Gly Ala Gly Met Gly Gly  
145 150 155 160

Met Gly Asp Tyr Ser Asn Pro Phe Asp Leu Phe Glu Ser Leu Phe Glu  
165 170 175

Gly Met Gly Gly Met Gly Gly Met Gly Gly Gly Met Gly Ser Arg Gly  
180 185 190

Ser Arg Ser Arg Ala Ile Asp Gly Glu Asp Glu Tyr Tyr Ser Leu Ile  
195 200 205

Leu Asn Phe Lys Glu Ala Val Phe Gly Ile Glu Lys Glu Ile Glu Ile  
210 215 220

Ser Arg Leu Glu Ser Cys Gly Thr Cys Asn Gly Ser Gly Ala Lys Ala  
225 230 235 240

Gly Thr Lys Pro Thr Lys Cys Lys Thr Cys Gly Gly Gln Gly Gln Val  
245 250 255

Val Ala Ser Thr Arg Thr Pro Leu Gly Val Phe Gln Gln Val Met Thr  
260 265 270

047-E2F-PCT.ST25.txt

Cys Ser Pro Cys Asn Gly Thr Gly Glu Ile Ser Lys Pro Cys Gly Ala  
275 285

Cys Ser Gly Asp Gly Arg Val Arg Arg Thr Lys Arg Ile Ser Leu Lys  
290 295 300

Val Pro Ala Gly Val Asp Ser Gly Ser Arg Leu Arg Val Arg Gly Glu  
305 310 315 320

Gly Asn Ala Gly Lys Arg Gly Gly Ser Pro Gly Asp Leu Phe Ala Val  
325 330 335

Ile Glu Val Ile Pro Asp Pro Val Leu Lys Arg Asp Asp Thr Asn Ile  
340 345 350

Leu Tyr Thr Cys Lys Ile Ser Tyr Val Asp Ala Ile Leu Gly Thr Thr  
355 360 365

Leu Lys Val Pro Thr Val Asp Gly Glu Val Asp Leu Lys Val Pro Ala  
370 375 380

Gly Thr Gln Pro Ser Thr Thr Leu Val Met Ala Lys Lys Gly Val Pro  
385 390 395 400

Val Leu Asn Lys Ser Lys Met Arg Gly Asp Gln Leu Val Arg Val Gln  
405 410 415

Val Glu Ile Pro Lys Arg Leu Ser Lys Glu Glu Lys Met Leu Val Glu  
420 425 430

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<211> 852

<212> DNA

<213> Arabidopsis thaliana

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gaattggggc tttttgcaat ctttgatggt cataaagggt atcatgtgtgc tgcttatctg 240

cagaaacatc tcttctctaa tatccttaaa gatggagagt tcttgggtga tcctcgaaga 300  
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<211> 283

<212> PRT

<213> *Arabidopsis thaliana*

<400> 2230

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20 25 30

Tyr Gly Phe Ser Leu Ile Lys Gly Lys Ser Asn His Ser Met Glu Asp  
35 40 45

Tyr His Val Ala Lys Phe Thr Asn Phe Asn Gly Asn Glu Leu Gly Leu  
50 55 60

Phe Ala Ile Phe Asp Gly His Lys Gly Asp His Val Ala Ala Tyr Leu  
65 70 75 80

Gln Lys His Leu Phe Ser Asn Ile Leu Lys Asp Gly Glu Phe Leu Val  
85 90 95

Asp Pro Arg Arg Ala Ile Ala Lys Ala Tyr Glu Asn Thr Asp Gln Lys  
100 105 110

047-E2F-PCT.ST25.txt

Ile Leu Ala Asp Asn Arg Thr Asp Leu Glu Ser Gly Gly Ser Thr Ala  
115 120 125

Val Thr Ala Ile Leu Ile Asn Gly Lys Ala Leu Trp Ile Ala Asn Val  
130 135 140

Gly Asp Ser Arg Ala Ile Val Ser Ser Arg Gly Lys Ala Lys Gln Met  
145 150 155 160

Ser Val Asp His Asp Pro Asp Asp Asp Thr Glu Arg Ser Met Ile Glu  
165 170 175

Ser Lys Gly Gly Phe Val Thr Asn Arg Pro Gly Asp Val Pro Arg Val  
180 185 190

Asn Gly Leu Leu Ala Val Ser Arg Val Phe Gly Asp Lys Asn Leu Lys  
195 200 205

Ala Tyr Leu Asn Ser Glu Pro Glu Ile Lys Asp Val Thr Ile Asp Ser  
210 215 220

His Thr Asp Phe Leu Ile Leu Ala Ser Asp Gly Ile Ser Lys Val Met  
225 230 235 240

Ser Asn Gln Glu Ala Val Asp Val Ala Lys Lys Leu Lys Asp Pro Lys  
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Glu Ala Ala Arg Gln Val Val Ala Glu Ala Leu Lys Arg Asn Ser Lys  
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<211> 1137

<212> DNA

<213> Arabidopsis thaliana

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ctctctgacc tcctctcca tggagctcag gttcatagac atgttcataa cttcagggag 240

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&lt;210&gt; 2232

&lt;211&gt; 378

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2232

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Met Met Leu Val Arg Ser Val Phe Arg Ser Gln Leu Arg Pro Ser Val
1           5           10          15

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Ser Gly Gly Leu Gln Ser Ala Ser Cys Tyr Ser Ser Leu Ser Ala Ala
          20          25          30

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Ser Ala Glu Ala Glu Arg Thr Ile Arg Glu Gly Pro Arg Asn Asp Trp
          35          40          45

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Ser Arg Asp Glu Ile Lys Ser Val Tyr Asp Ser Pro Leu Leu Asp Leu
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Leu Phe His Gly Ala Gln Val His Arg His Val His Asn Phe Arg Gln
65          70          75          80

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047-E2F-PCT.ST25.txt

Val Gln Gln Cys Thr Leu Leu Ser Ile Lys Thr Gly Gly Cys Ser Glu  
85 90 95

Asp Cys Ser Tyr Cys Pro Gln Ser Ser Arg Tyr Ser Thr Gly Val Lys  
100 105 110

Ala Gln Arg Leu Met Ser Lys Asp Ala Val Ile Asp Ala Ala Lys Lys  
115 120 125

Ala Lys Glu Ala Gly Ser Thr Arg Phe Cys Met Gly Ala Ala Trp Arg  
130 135 140

Asp Thr Ile Gly Arg Lys Thr Asn Phe Ser Gln Ile Leu Glu Tyr Ile  
145 150 155 160

Lys Glu Ile Arg Gly Met Gly Met Glu Val Cys Cys Thr Leu Gly Met  
165 170 175

Ile Glu Lys Gln Gln Ala Leu Glu Leu Lys Lys Ala Gly Leu Thr Ala  
180 185 190

Tyr Asn His Asn Leu Asp Thr Ser Arg Glu Tyr Tyr Pro Asn Val Ile  
195 200 205

Thr Thr Arg Ser Tyr Asp Asp Arg Leu Glu Thr Leu Ser His Val Arg  
210 215 220

Asp Ala Gly Ile Asn Val Cys Ser Gly Gly Ile Ile Gly Leu Gly Glu  
225 230 235 240

Ala Glu Glu Asp Arg Ile Gly Leu Leu His Thr Leu Ala Thr Leu Pro  
245 250 255

Ser His Pro Glu Ser Val Pro Ile Asn Ala Leu Leu Ala Val Lys Gly  
260 265 270

Thr Pro Leu Glu Asp Gln Lys Pro Val Glu Ile Trp Glu Met Ile Arg  
275 280 285

Met Ile Gly Thr Ala Arg Ile Val Met Pro Lys Ala Met Val Arg Leu  
290 295 300

Ser Ala Gly Arg Val Arg Phe Ser Met Ser Glu Gln Ala Leu Cys Phe  
305 310 315 320

Leu Ala Gly Ala Asn Ser Ile Phe Thr Gly Glu Lys Leu Leu Thr Thr  
325 330 335

047-E2F-PCT.ST25.txt

Pro Asn Asn Asp Phe Asp Ala Asp Gln Leu Met Phe Lys Thr Leu Gly  
340 345 350

Leu Ile Pro Lys Pro Pro Ser Phe Ser Glu Asp Asp Ser Glu Ser Glu  
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<211> 1335

<212> DNA

<213> Arabidopsis thaliana

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<211> 444

<212> PRT

<213> Arabidopsis thaliana

<400> 2234

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Lys Val Lys Phe Ala Lys Asp Thr Val Ser Gly His Ser Phe Ala Val  
 35 40 45

Lys Ile Ile Asp Lys Ser Arg Ile Ala Asp Leu Asn Phe Ser Leu Gln  
 50 55 60

Ile Lys Arg Glu Ile Arg Thr Leu Lys Met Leu Lys His Pro His Ile  
 65 70 75 80

Val Arg Leu His Glu Val Leu Ala Ser Lys Thr Lys Ile Asn Met Val  
 85 90 95

Met Glu Leu Val Thr Gly Gly Glu Leu Phe Asp Arg Ile Val Ser Asn  
 100 105 110

Gly Lys Leu Thr Glu Thr Asp Gly Arg Lys Met Phe Gln Gln Leu Ile  
 115 120 125

Asp Gly Ile Ser Tyr Cys His Ser Lys Gly Val Phe His Arg Asp Leu  
 130 135 140

Lys Leu Glu Asn Val Leu Leu Asp Ala Lys Gly His Ile Lys Ile Thr  
 145 150 155 160

Asp Phe Gly Leu Ser Ala Leu Pro Gln His Phe Arg Asp Asp Gly Leu  
 165 170 175

047-E2F-PCT.ST25.txt

Leu His Thr Thr Cys Gly Ser Pro Asn Tyr Val Ala Pro Glu Val Leu  
 180 185 190  
 Ala Asn Arg Gly Tyr Asp Gly Ala Ala Ser Asp Ile Trp Ser Cys Gly  
 195 200 205  
 Val Ile Leu Tyr Val Ile Leu Thr Gly Cys Leu Pro Phe Asp Asp Arg  
 210 215 220  
 Asn Leu Ala Val Leu Tyr Gln Lys Ile Cys Lys Gly Asp Pro Pro Ile  
 225 230 235 240  
 Pro Arg Trp Leu Ser Pro Gly Ala Arg Thr Met Ile Lys Arg Met Leu  
 245 250 255  
 Asp Pro Asn Pro Val Thr Arg Ile Thr Val Val Gly Ile Lys Ala Ser  
 260 265 270  
 Glu Trp Phe Lys Leu Glu Tyr Ile Pro Ser Ile Pro Asp Asp Asp Asp  
 275 280 285  
 Glu Glu Glu Val Asp Thr Asp Asp Asp Ala Phe Ser Ile Gln Glu Leu  
 290 295 300  
 Gly Ser Glu Glu Gly Lys Gly Ser Asp Ser Pro Thr Ile Ile Asn Ala  
 305 310 315 320  
 Phe Gln Leu Ile Gly Met Ser Ser Phe Leu Asp Leu Ser Gly Phe Phe  
 325 330 335  
 Glu Gln Glu Asn Val Ser Glu Arg Arg Ile Arg Phe Thr Ser Asn Ser  
 340 345 350  
 Ser Ala Lys Asp Leu Leu Glu Lys Ile Glu Thr Ala Val Thr Glu Met  
 355 360 365  
 Gly Phe Ser Val Gln Lys Lys His Ala Lys Leu Arg Val Lys Gln Glu  
 370 375 380  
 Glu Arg Asn Gln Lys Gly Gln Val Gly Leu Ser Val Thr Ala Glu Val  
 385 390 395 400  
 Phe Glu Ile Lys Pro Ser Leu Asn Val Val Glu Leu Arg Lys Ser Tyr  
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<211> 537

<212> DNA

<213> Arabidopsis thaliana

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<211> 178

<212> PRT

<213> Arabidopsis thaliana

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 Glu Lys Pro Thr Lys Arg Glu Thr Arg Lys Glu Lys Lys Ala Lys Lys  
 35 40 45  
 Asp Pro Asn Lys Pro Lys Arg Ala Pro Ser Ala Phe Phe Val Phe Leu  
 50 55 60

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Glu Asp Phe Arg Val Thr Phe Lys Lys Glu Asn Pro Asn Val Lys Ala  
 65 70 75 80  
 Val Ser Ala Val Gly Lys Ala Gly Gly Gln Lys Trp Lys Ser Met Ser  
 85 90  
 Gln Ala Glu Lys Ala Pro Tyr Glu Glu Lys Ala Ala Lys Arg Lys Ala  
 100 105 110  
 Glu Tyr Glu Lys Gln Met Asp Ala Tyr Asn Lys Asn Leu Glu Glu Gly  
 115 120 125  
 Ser Asp Glu Ser Glu Lys Ser Arg Ser Glu Ile Asn Asp Glu Asp Glu  
 130 135 140  
 Ala Ser Gly Glu Glu Glu Leu Leu Glu Lys Glu Ala Ala Gly Asp Asp  
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<211> 966

<212> DNA

<213> Arabidopsis thaliana

<400> 2237

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&lt;210&gt; 2238

&lt;211&gt; 321

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2238

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Val Phe Ala Leu Cys Ser Val Ala His Ser Leu Ser Cys Asp Val Lys  
20 25 30

Val Val Gly Asp Val Glu Val Ile Gly Tyr Ser Glu Ile Ser Lys Ile  
35 40 45

Lys Ile Pro Asn Ala Phe Ser Gly Leu Arg Val Thr Ile Glu Cys Lys  
50 55 60

Ala Ala Asp Ser Lys Gly His Phe Val Thr Arg Gly Ser Gly Glu Val  
65 70 75 80

Asp Glu Thr Gly Lys Phe His Leu Asn Ile Pro His Asp Ile Val Gly  
85 90 95

Asp Asp Gly Thr Leu Lys Glu Ala Cys Tyr Ala His Leu Gln Ser Ala  
100 105 110

Phe Gly Asn Pro Cys Pro Ala His Asp Gly Leu Glu Ala Ser Lys Ile  
115 120 125

Val Phe Leu Ser Lys Ser Gly Gln Asn His Val Leu Gly Leu Lys Lys  
130 135 140

047-E2F-PCT.ST25.txt

Ser Leu Lys Phe Ser Pro Glu Val Cys Ile Ser Lys Phe Phe Trp His  
145 150 155 160

Met Pro Lys Phe Pro Leu Pro Pro Pro Leu Asn Leu Pro Pro Leu Thr  
165 170 175

Phe Pro Lys Ile Lys Lys Pro Cys Pro Pro Ile Tyr Lys Pro Pro Val  
180 185 190

Val Ile Pro Lys Lys Pro Cys Pro Pro Lys Ile Ala His Lys Pro Ile  
195 200 205

Tyr Lys Pro Pro Val Pro Ile Tyr Lys Pro Pro Val Pro Ile Tyr Lys  
210 215 220

Pro Pro Val Val Ile Pro Lys Lys Pro Cys Pro Pro Lys Ile His Lys  
225 230 235 240

Pro Ile Tyr Lys Pro Pro Val Pro Ile Tyr Lys Pro Pro Val Val Ile  
245 250 255

Pro Lys Lys Thr Phe Pro Pro Leu His Lys Pro Ile Tyr Lys His Pro  
260 265 270

Val Pro Ile Tyr Lys Pro Ile Phe Lys Pro Pro Val Val Val Ile Pro  
275 280 285

Lys Lys Pro Cys Pro Pro Leu Pro Lys Phe Pro His Phe Pro Pro Lys  
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Tyr Ile Pro His Pro Lys Phe Gly Lys Trp Pro Pro Phe Pro Ser His  
305 310 315 320

Pro

<210> 2239

<211> 1131

<212> DNA

<213> Arabidopsis thaliana

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<211> 376

<212> PRT

<213> Arabidopsis thaliana

<400> 2240

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Gly	Glu	Glu	Val	Glu	Glu	Asn	Ser	Ser	Leu	Ser	Ser	Ser	Ser	Pro	
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Phe	Val	Val	Leu	Gln	Gln	Asp	Leu	Phe	Trp	Glu	Asp	Glu	Asp	Leu	Val
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Thr Leu Phe Ser Lys Glu Glu Gln Gly Leu Ser Cys Leu Asp Asp  
65 70 75 80

Val Tyr Leu Ser Thr Asp Arg Lys Glu Ala Val Gly Trp Ile Leu Arg  
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Val Asn Ala His Tyr Gly Phe Ser Thr Leu Ala Ala Val Leu Ala Ile  
100 105 110

Thr Tyr Leu Asp Lys Phe Ile Cys Ser Tyr Ser Leu Gln Arg Asp Lys  
115 120 125

Pro Trp Met Leu Gln Leu Val Ser Val Ala Cys Leu Ser Leu Ala Ala  
130 135 140

Lys Val Glu Glu Thr Gln Val Pro Leu Leu Leu Asp Phe Gln Val Glu  
145 150 155 160

Glu Thr Lys Tyr Val Phe Glu Ala Lys Thr Ile Gln Arg Met Glu Leu  
165 170 175

Leu Ile Leu Ser Thr Leu Glu Trp Lys Met His Leu Ile Thr Pro Ile  
180 185 190

Ser Phe Val Asp His Ile Ile Arg Arg Leu Gly Leu Lys Asn Asn Ala  
195 200 205

His Trp Asp Phe Leu Asn Lys Cys His Arg Leu Leu Leu Ser Val Ile  
210 215 220

Ser Asp Ser Arg Phe Val Gly Tyr Leu Pro Ser Val Val Ala Ala Ala  
225 230 235 240

Thr Met Met Arg Ile Ile Glu Gln Val Asp Pro Phe Asp Pro Leu Ser  
245 250 255

Tyr Gln Thr Asn Leu Leu Gly Val Leu Asn Leu Thr Lys Glu Lys Val  
260 265 270

Lys Thr Cys Tyr Asp Leu Ile Leu Gln Leu Pro Val Asp Arg Ile Gly  
275 280 285

Leu Gln Ile Gln Ile Gln Ser Ser Lys Lys Arg Lys Ser His Asp Ser  
290 295 300

Ser Ser Ser Leu Asn Ser Pro Ser Cys Val Ile Asp Ala Asn Pro Phe  
305 310 315 320



Asn Ser Asp Glu Ser Ser Asn Asp Ser Trp Ser Ala Ser Ser Cys Asn  
 325 330 335

Pro Pro Thr Ser Ser Ser Ser Pro Gln Gln Gln Pro Pro Leu Lys Lys  
 340 345 350

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Pro Trp Ala Ile Val Ala Thr Pro  
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<210> 2241

<211> 1440

<212> DNA

<213> Arabidopsis thaliana

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<210> 2242

<211> 479

<212> PRT

<213> Arabidopsis thaliana

<400> 2242

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Ile Ala Phe Leu Ala Thr Ala His Leu Cys Glu Ala Gly Leu Ser Gln  
20 25 30

Lys Glu Gln Asp Lys Val Ser Lys Leu Pro Gly Gln Asn Phe Asn Val  
35 40 45

Ser Phe Ala His Tyr Ser Gly Phe Val Ala Thr Asn Glu Gln Leu Gly  
50 55 60

Arg Ala Leu Phe Tyr Trp Leu Phe Glu Ala Val Glu Asp Ala Lys Ser  
65 70 75 80

Lys Pro Leu Val Leu Trp Leu Asn Gly Gly Pro Gly Cys Ser Ser Val  
85 90 95

Ala Tyr Gly Glu Ala Glu Glu Ile Gly Pro Phe His Ile Lys Ala Asp  
100 105 110

Gly Lys Thr Leu Tyr Leu Asn Gln Tyr Ser Trp Asn Gln Ala Ala Asn  
115 120 125

Ile Leu Phe Leu Asp Ala Pro Val Gly Val Gly Tyr Ser Tyr Ser Asn  
130 135 140

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Thr Ser Ser Asp Leu Lys Ser Asn Gly Asp Lys Arg Thr Ala Glu Asp  
145 150 155 160

Ser Leu Lys Phe Leu Leu Lys Trp Val Glu Arg Phe Pro Glu Tyr Lys  
165 170 175

Gly Arg Asp Phe Tyr Ile Val Gly Glu Ser Tyr Ala Gly His Tyr Ile  
180 185 190

Pro Gln Leu Ser Glu Ala Ile Val Lys His Asn Gln Gly Ser Asp Lys  
195 200 205

Asn Ser Ile Asn Leu Lys Gly Tyr Met Val Gly Asn Gly Leu Met Asp  
210 215 220

Asp Phe His Asp Arg Leu Gly Leu Phe Gln Tyr Ile Trp Ser Leu Gly  
225 230 235 240

Phe Ile Ser Asp Gln Thr Tyr Ser Leu Leu Gln Leu Gln Cys Gly Phe  
245 250 255

Glu Ser Phe Ile His Ser Ser Lys Gln Cys Asn Lys Ile Leu Glu Ile  
260 265 270

Ala Asp Lys Glu Ile Gly Asn Ile Asp Gln Tyr Ser Val Phe Thr Pro  
275 280 285

Ala Cys Val Ala Asn Ala Ser Gln Ser Asn Met Leu Leu Lys Lys Arg  
290 295 300

Pro Met Thr Ser Arg Val Ser Glu Gln Tyr Asp Pro Cys Thr Glu Lys  
305 310 315 320

His Thr Thr Val Tyr Phe Asn Leu Pro Glu Val Gln Lys Ala Leu His  
325 330 335

Val Pro Pro Gly Leu Ala Pro Ser Lys Trp Asp Thr Cys Ser Asp Val  
340 345 350

Val Ser Glu His Trp Asn Asp Ser Pro Ser Ser Val Leu Asn Ile Tyr  
355 360 365

His Glu Leu Ile Ala Ala Gly Leu Arg Ile Trp Val Phe Ser Gly Asp  
370 375 380

Ala Asp Ala Val Val Pro Val Thr Ser Thr Arg Tyr Ser Ile Asp Ala  
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Leu Asn Leu Arg Pro Leu Ser Ala Tyr Gly Pro Trp Tyr Leu Asp Gly  
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Gln Val Gly Gly Trp Ser Gln Gln Tyr Ala Gly Leu Asn Phe Val Thr  
420 425 430

Val Arg Gly Ala Gly His Glu Val Pro Leu His Arg Pro Lys Gln Ala  
435 440 445

Leu Ala Leu Phe Lys Ala Phe Ile Ser Gly Thr Pro Leu Ser Thr His  
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&lt;210&gt; 2244

&lt;211&gt; 291

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2244

Met Ile Gln Asp Lys Ser Lys Gly Ala Lys Gln Thr Leu Leu Glu Arg  
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Pro Trp Phe Leu Ala Val Ala Leu Ala Gly Leu Ile Gly Gly Ala Met  
 20 25 30

Leu Ile Thr Ser Phe Ile Arg Ala Thr Asp Asn Thr Leu Ser Leu Cys  
 35 40 45

Ser Thr Ala Lys Asn Thr Ala Ala Ser Ile Ala Lys Tyr Thr Ala Thr  
 50 55 60

Pro Ile Gln Leu Gln Ser Ile Val His Tyr Ala Thr Ser His Thr Val  
 65 70 75 80

Pro Gln Gln Ser Phe Glu Glu Ile Ser Ile Ser Leu Asn Val Leu Lys  
 85 90 95

Glu Arg Leu Pro Cys Asn Phe Leu Val Phe Gly Leu Gly Arg Asp Ser  
 100 105 110

Leu Met Trp Ala Ser Leu Asn Pro Gly Gly Thr Thr Val Phe Leu Glu  
 115 120 125

Glu Asp Pro Glu Trp Ile Glu Ala Val Leu Lys Asp Ala Pro Ser Leu  
 130 135 140

Arg Ala His His Val Gln Tyr Arg Thr His Leu Ser Glu Ala Gly Arg  
 145 150 155 160

Leu Leu Ser Thr Tyr Lys Asn Glu Pro Met Cys Leu Pro Ala Lys Ala  
 165 170 175

Phe Pro Ile Arg Tyr Asn Glu Lys Cys Pro Leu Ala Leu Thr Ser Leu  
 180 185 190

Pro Asp Glu Phe Tyr Asp Thr Glu Trp Asp Leu Ile Met Val Asp Ala  
 195 200 205

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Pro Lys Gly Tyr Phe Pro Glu Ala Pro Gly Arg Met Ala Ala Ile Phe  
210 215 220

Ser Ser Ala Ile Met Ala Arg Asn Arg Lys Gly Asp Gly Thr Thr His  
225 230 235

Val Phe Leu His Asp Val Asn Arg Lys Val Glu Asn Ala Phe Ala Asn  
245 250 255

Glu Phe Leu Cys Glu Lys Tyr Lys Val Asn Ser Val Gly Arg Leu Trp  
260 265 270

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Arg Phe Cys  
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<212> DNA

<213> Arabidopsis thaliana

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<211> 201

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<213> *Arabidopsis thaliana*

&lt;400&gt; 2246

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Ser Leu Asn Ser Ser Arg Arg Ser Leu Leu Cys Lys Arg Arg Leu Val  
 35 40 45

Val Ser Cys Leu Asp Thr Asn Asp Asn Ser Val Thr Thr Thr Ser Val  
 50 55 60

Asp Ser Ser Ser Ser Ser Asp Ser Asn Lys Pro Val Ser Glu Ser Val  
 65 70 75 80

Glu Ser Ser Asn Gly Thr Ala Lys Lys Ala Pro Leu Thr Ala Arg Glu  
 85 90 95

Arg Leu Arg Ala Ala Arg Val Leu Ser Arg Tyr Thr Glu Ala Thr Pro  
 100 105 110

Lys Pro Ser Lys Pro Lys Met Gly Ser Gln Leu Leu Asp Val Leu Lys  
 115 120 125

Glu Ser Asp Lys Lys Ser Lys Arg Lys Pro Gly Leu Pro Glu Ala Pro  
 130 135 140

Thr Asn Met Leu Asp Ser Ser Arg Arg Gly Met Pro Lys Ser Gly Leu  
 145 150 155 160

Thr Phe Asp Leu Pro Gly Gly Ser Asp Ile Leu Ile Ile Ala Phe Ser  
 165 170 175

Phe Val Phe Ile Ser Thr Val Met Phe Ala Thr Thr Phe Leu Val Trp  
 180 185 190

Lys Leu Gly Ala Ile His Phe Asn Glu  
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&lt;211&gt; 2046

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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tctcgaaga agaagcttct taagaaacag gcggcaggta agaagagaat gaaagccata	1980
ggtagagttg atgtccctca agaagctttc atggccgttc tcaaacttga acgagaagta	2040
ttgtga	2046

<210> 2248

<211> 681

<212> PRT

<213> Arabidopsis thaliana

<400> 2248

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20 25 30	
Ile Ser Val Ser Gly Phe Arg Arg His Ser Asn Arg Lys Leu Gln Ile	
35 40 45	
Leu Cys Gln Ala Thr Ala Gly Thr Glu Pro Gln Ser Gly Leu Ser Val	
50 55 60	
Ser Gly Ser Lys Leu Ala Ala Arg Ser Gly Gln Asp Arg Leu Leu Lys	
65 70 75 80	
Val Pro Ile Ser Asn Ile Arg Asn Phe Ser Ile Ile Ala His Ile Asp	
85 90 95	
His Gly Lys Ser Thr Leu Ala Asp Lys Leu Leu Gln Val Thr Gly Thr	
100 105 110	
Val Gln Asn Arg Asp Met Lys Glu Gln Phe Leu Asp Asn Met Asp Leu	
115 120 125	
Glu Arg Glu Arg Gly Ile Thr Ile Lys Leu Gln Ala Ala Arg Met Arg	
130 135 140	

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Tyr Val Tyr Glu Asp Thr Pro Phe Cys Leu Asn Leu Ile Asp Thr Pro  
 145 150 155  
 Gly His Val Asp Phe Ser Tyr Glu Val Ser Arg Ser Leu Ala Ala Cys  
 165 170 175  
 Glu Gly Ala Leu Leu Val Val Asp Ala Ser Gln Gly Val Glu Ala Gln  
 180 185 190  
 Thr Leu Ala Asn Val Tyr Leu Ala Leu Glu Asn Asn Leu Glu Ile Ile  
 195 200 205  
 Pro Val Leu Asn Lys Ile Asp Leu Pro Gly Ala Glu Pro Glu Lys Val  
 210 215 220  
 Leu Arg Glu Ile Glu Glu Val Ile Gly Leu Asp Cys Ser Lys Ala Ile  
 225 230 235 240  
 Phe Cys Ser Ala Lys Glu Gly Ile Gly Ile Thr Glu Ile Leu Asp Ala  
 245 250 255  
 Ile Val Gln Arg Ile Pro Ala Pro Leu Asp Thr Ala Gly Lys Pro Leu  
 260 265 270  
 Arg Ala Leu Ile Phe Asp Ser Tyr Tyr Asp Pro Tyr Arg Gly Val Ile  
 275 280 285  
 Val Tyr Phe Arg Val Ile Asp Gly Lys Val Lys Lys Gly Asp Arg Ile  
 290 295 300  
 Phe Phe Met Ala Ser Gly Lys Asp Tyr Phe Ala Asp Glu Val Gly Val  
 305 310 315 320  
 Leu Ser Pro Asn Gln Ile Gln Val Asp Glu Leu Tyr Ala Gly Glu Val  
 325 330 335  
 Gly Tyr Ile Ala Ala Ser Val Arg Ser Val Ala Asp Ala Arg Val Gly  
 340 345 350  
 Asp Thr Ile Thr His Tyr Ser Arg Lys Ala Glu Ser Ser Leu Pro Gly  
 355 360 365  
 Tyr Glu Glu Ala Thr Pro Met Val Phe Cys Gly Leu Phe Pro Val Asp  
 370 375 380  
 Ala Asp Gln Phe Pro Asp Leu Arg Asp Ala Leu Glu Lys Leu Gln Leu  
 385 390 395 400

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Asn Asp Ala Ala Leu Lys Phe Glu Pro Glu Thr Ser Ser Ala Met Gly  
 405 410 415  
 Phe Gly Phe Arg Cys Gly Phe Leu Gly Leu Leu His Met Glu Ile Val  
 420 425 430  
 Gln Glu Arg Leu Glu Arg Glu Tyr Asn Leu Asn Leu Ile Thr Thr Ala  
 435 440 445  
 Pro Ser Val Val Tyr Arg Val Asn Ser Val Asn Gly Asp Thr Thr Leu  
 450 455 460  
 Cys Ser Asn Pro Ser Arg Leu Pro Asp Pro Gly Gln Arg Lys Ser Val  
 465 470 475 480  
 Glu Glu Pro Tyr Val Lys Ile Glu Leu Leu Thr Pro Lys Asp Tyr Ile  
 485 490 495  
 Gly Ala Leu Met Glu Leu Ala Gln Glu Arg Arg Gly Glu Phe Lys Glu  
 500 505 510  
 Met Lys Tyr Ile Ala Glu Asn Arg Ala Ser Ile Leu Tyr Glu Leu Pro  
 515 520 525  
 Leu Ala Glu Met Val Gly Asp Phe Phe Asp Gln Leu Lys Ser Arg Thr  
 530 535 540  
 Lys Gly Tyr Ala Ser Met Glu Tyr Ser Val Ile Gly Tyr Arg Glu Ser  
 545 550 555 560  
 Asp Leu Ile Lys Leu Asp Ile Leu Ile Asn Ala Glu Met Val Glu Pro  
 565 570 575  
 Leu Ser Thr Ile Val His Arg Asp Lys Ala Tyr Ser Val Gly Arg Ala  
 580 585 590  
 Leu Thr Gln Lys Leu Lys Glu Leu Ile Pro Arg Gln Met Phe Lys Val  
 595 600 605  
 Pro Ile Gln Ala Cys Ile Gly Ser Lys Val Ile Ala Ser Glu Ala Leu  
 610 615 620  
 Ser Ala Ile Arg Lys Asp Val Leu Ala Lys Cys Tyr Gly Gly Asp Ile  
 625 630 635 640  
 Ser Arg Lys Lys Lys Leu Leu Lys Lys Gln Ala Ala Gly Lys Lys Arg  
 3229

Met Lys Ala Ile Gly Arg Val Asp Val Pro Gln Glu Ala Phe Met Ala  
 660 665

Val Leu Lys Leu Glu Arg Glu Val Leu  
 675 680

<210> 2249

<211> 1644

<212> DNA

<213> Arabidopsis thaliana

<400> 2249  
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 cgccgggttaa tctcagccac cgcaaccgct ttttcatctg attcctcttc ctcattccgt 120  
 cggacacggtg gtgcgcgtca gagaatcgct tcatcgaat cccggcgctc gtcaccgtct 180  
 cctgttcgga gaccatctga tggattcagt ttcatgttc ggtcaccgtc atctgattca 240  
 tcgatctcat cacggaagtc accgacgacg gctccgcta cggaggagct cgacgcttcc 300  
 ctagagattc ttctccggc gacgaggaag gagcttgta agcagcaggc gattgaggaa 360  
 ttgatcgaag tagtgatgga tttagggaga aagccacttg ctagattccc ttccggcgat 420  
 tgggtgatct cagagcagcc tgtgacacac caggatctgg agcttgcggt atcaaaaggtt 480  
 ggtgattttt cggatgataa ccgatccggg attgacagat ctttgcatcg tataagcgct 540  
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 tctcctggag ttggcaaaa aactttaatc agagaaattg cacggatggt agctgatgaa 720  
 cacaggaaac gtgtagtgat tgttgacacg tcaaatgaga ttggagggtga tggatgatt 780  
 cctcattctg gaattggctg tgccaggcgg atgcaagttc caaatgtgaa ttacagcac 840  
 gatgttatga ttgaggcggg tgagaatcat atgcctgaga caatcatcat tgacgagata 900  
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 gcaactgctc atgggatgac tatagacaac ataatcaaaa atccttcttt cgagattctt 1020  
 attggtgtaa ttgagagtgt gactcttggt gatgaagaag caaggaaaag aaaagtgcag 1080  
 aagacaattc ttgaaagaaa aggacctccg acattcactt gtgctgtaga gatgatctg 1140  
 agaactgagt gtcgtgttca tcaaagacta gatgttaccg ttgatgctat actagctggg 1200  
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gtgactccca ttcctttgga gaaccttgaa gaggagcctg caccattgct caacagagat 1320  
 ttcgtaagtg aattgctgtc tgacgatgaa gatgaagatt ttcttctcat tcggtctaata 1380  
 aaggccagaa gtaacacata cacgagccca agaagctcac cggttcatgt gtatacttac 1440  
 aatgtccttg aagctgatct cctccaagta gctgaagtta tgggtctaga cgacgaaata 1500  
 gaagtacag atgatgttg agaagcagat gtcattctag cctcaagttc tgaattgaaa 1560  
 cagaattcat caatccgtcg tgttgccaaa ttacacaagc taccgatatt tgtcattaag 1620  
 gtatccttct ttttgcattg ctga 1644

<210> 2250

<211> 547

<212> PRT

<213> Arabidopsis thaliana

<400> 2250

Met Arg Ala Leu Asn Ser Arg Leu Val Leu Ile Asp Ile Asn Ser Ser  
 1 5 10 15

Trp Gln Ala Ser Arg Arg Leu Ile Ser Ala Thr Ala Thr Ala Phe Ser  
 20 25 30

Ser Asp Ser Ser Ser Ser Phe Arg Arg Thr Arg Gly Ala Arg Gln Arg  
 35 40 45

Ile Ala Ser Ser Lys Ser Pro Ala Ser Ser Pro Ser Pro Val Arg Arg  
 50 55 60

Pro Ser Asp Gly Phe Ser Phe Asp Val Arg Ser Pro Ser Ser Asp Ser  
 65 70 75 80

Ser Ile Ser Ser Arg Lys Ser Pro Thr Thr Ala Pro Pro Thr Val Glu  
 85 90 95

Leu Asp Ala Phe Leu Glu Ile Leu Pro Ala Thr Arg Lys Glu Leu  
 100 105 110

Val Lys His Glu Ala Ile Glu Glu Leu Ile Glu Val Val Met Asp Leu  
 115 120 125

Gly Arg Lys Pro Leu Ala Arg Phe Pro Ser Gly Asp Trp Val Ile Ser  
 130 135 140

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Glu Gln Pro Val Thr His Gln Asp Leu Glu Leu Ala Val Ser Lys Val  
 145 150 155 160  
 Gly Asp Phe Ser Asp Asp Asn Arg Ser Gly Ile Asp Arg Ser Leu His  
 165 170 175  
 Arg Ile Ser Ala Ile Arg Asn Arg Lys Leu Gln Val Ile Gly Leu Thr  
 180 185 190  
 Cys Arg Val Gly Arg Val Val Ser Gly Ser Ala Glu Ile Ile Arg Asp  
 195 200 205  
 Leu Ile Glu Gly Gly Gly Ser Ile Leu Val Ile Gly Ser Pro Gly Val  
 210 215 220  
 Gly Lys Thr Thr Leu Ile Arg Glu Ile Ala Arg Met Leu Ala Asp Glu  
 225 230 235 240  
 His Arg Lys Arg Val Val Ile Val Asp Thr Ser Asn Glu Ile Gly Gly  
 245 250 255  
 Asp Gly Asp Val Pro His Ser Gly Ile Gly Arg Ala Arg Arg Met Gln  
 260 265 270  
 Val Pro Asn Val Asn Leu Gln His Asp Val Met Ile Glu Ala Val Glu  
 275 280 285  
 Asn His Met Pro Glu Thr Ile Ile Ile Asp Glu Ile Gly Thr Glu Leu  
 290 295 300  
 Glu Ala Leu Ala Ala Ser Thr Ile Ala Gln Arg Gly Val Gln Leu Val  
 305 310 315 320  
 Ala Thr Ala His Gly Met Thr Ile Asp Asn Ile Ile Lys Asn Pro Ser  
 325 330 335  
 Leu Gln Ile Leu Ile Gly Gly Ile Glu Ser Val Thr Leu Gly Asp Glu  
 340 345 350  
 Glu Ala Arg Lys Arg Lys Val Gln Lys Thr Ile Leu Glu Arg Lys Gly  
 355 360 365  
 Pro Pro Thr Phe Thr Cys Ala Val Glu Met Ile Ser Arg Thr Glu Cys  
 370 375 380  
 Arg Val His Gln Arg Leu Asp Val Thr Val Asp Ala Ile Leu Ala Gly  
 385 390 395 400

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Lys Ser Ala Pro Phe Glu Ile Arg Gln Ile Arg Gly Glu Asp Asp Val  
405 410 415

Pro His Lys Leu Val Thr Pro Ile Pro Leu Glu Asn Leu Glu Glu Glu  
420 425 430

Pro Ala Pro Leu Leu Asn Arg Asp Phe Val Ser Glu Leu Leu Ser Asp  
435 440 445

Asp Glu Asp Glu Asp Phe Leu Leu Ile Arg Ser Asn Lys Ala Arg Ser  
450 455 460

Asn Thr Tyr Thr Ser Pro Arg Ser Ser Pro Val His Val Tyr Thr Tyr  
465 470 475 480

Asn Val Leu Glu Ala Asp Leu Leu Gln Val Ala Glu Val Met Gly Leu  
485 490 495

Asp Asp Glu Ile Glu Val Thr Asp Asp Val Gly Glu Ala Asp Val Ile  
500 505 510

Leu Ala Ser Ser Ser Glu Leu Lys Gln Asn Ser Ser Ile Arg Arg Val  
515 520 525

Ala Lys Leu His Lys Leu Pro Ile Phe Val Ile Lys Val Ser Phe Phe  
530 535 540

Leu His Gly  
545

<210> 2251

<211> 546

<212> DNA

<213> Arabidopsis thaliana

<400> 2251  
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tgcaaccggt cacctaccaa atcaccattt ccaggccatc atcctctggc tgggaggagg 120  
aagggtcact tgctccatta cgaacgtagt acagtgagga gattggttgt gacggcggcg 180  
acggagggat ctaaaaaatc taaagaaagt gaaccgtctt gggcgaatcc tgactcagat 240  
gagccacctc cttgggctag aaacgaaggt cgttcttcta cgtccaaga gagctttgag 300

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gttcctttct ttgtttatct gctagcttcc gcgattactg ccattgctgc tattggttct 360  
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tatactcctg tgcttggatt ctttgccttt actggaatcc ccacttctgt gttcctatgg 480  
ttcaaatccg ttgaagctgc taataaggaa gctcaagaac aagataaaag agatggcttt 540  
ctttaa 546

<210> 2252

<211> 181

<212> PRT

<213> Arabidopsis thaliana

<400> 2252

Met Ala Ala Ser Leu Thr Ser Leu Pro Thr Gly Phe Cys Leu Ser His  
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Gly Asp Glu Cys Cys Asn Arg Ser Pro Thr Lys Ser Pro Phe Pro Gly  
20 25 30

His His Pro Leu Ala Gly Arg Arg Lys Gly His Leu Leu His Tyr Glu  
35 40 45

Arg Ser Thr Val Arg Arg Leu Val Val Thr Ala Ala Thr Glu Gly Ser  
50 55 60

Lys Lys Ser Lys Glu Ser Glu Pro Ser Trp Ala Asn Pro Asp Ser Asp  
65 70 75 80

Glu Pro Pro Pro Trp Ala Arg Asn Glu Gly Arg Ser Ser Thr Ser Gln  
85 90 95

Glu Ser Phe Glu Val Pro Phe Phe Val Tyr Leu Leu Ala Ser Ala Ile  
100 105 110

Thr Ala Ile Ala Ala Ile Gly Ser Val Phe Glu Tyr Thr Ser Lys Asn  
115 120 125

Pro Val Phe Gly Ile Leu Glu Ser Asp Ser Ile Phe Tyr Thr Pro Val  
130 135 140

Leu Gly Phe Phe Ala Leu Thr Gly Ile Pro Thr Ser Val Phe Leu Trp  
145 150 155 160



Phe Lys Ser Val Glu Ala Ala Asn Lys Glu Ala Gln Glu Gln Asp Lys  
 165 170 175

Arg Asp Gly Phe Leu  
 180

<210> 2253

<211> 1068

<212> DNA

<213> *Arabidopsis thaliana*

<400> 2253

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cttgtcttct gtgtctttcg tgatctcatt gctctctcca ttcttgctcc tcttgcttat	180
atccgtgata agagaacaag acctccttgg aatcgacagt ttctcttagc ttcttcttcc	240
cttggtttaa cagggatatt tggtaatcag cttttgttcc tcattggtct gaattacacc	300
aatccaactt atgctgcagc cattcagccg tcgatcccgg tttttacttt catcttggtc	360
ctcattatgg gaacagagag actgaattta ttcaagctag aaggtaaacg taaggtagga	420
ggcacactga tttgtgtcgc tggggcggtg ctgatggttt tgttcgtgg actggccttg	480
tttggggaaa cagaggctga gtccttgggt catggtgaat caagacacac tgaacatct	540
ggacacttca tgcattgctcc ggtcttaaaag aagatccgg cgaatctttc agtcacagca	600
tactcgtatt tctttgggac catgtttatg gtgacatctg cttttttcat gactaatgag	660
tcgacgaact ggagctctac aagatccgag ttctttgcag ttgtctacgc aggagtaatc	720
gcgtctgctc tcaactatgg tctcttgaca tggtaaaata agatcttggg tccttccttg	780
gttgctctct ataactctct tcaaccgca gcctcagctt tctgtccag aatcttctct	840
ggaagcccta tctacttggg gagcatttta ggcggatgtg caatcatagc aggtctttat	900
agtgtcacct gggcatctta caaagaaaag aaagcggcag cagcaatggc tgtgatcccg	960
atcacctcaa aggaagctga acccttgatc tacaaggacc ataaaaacaa accaatagga	1020
catctattca caaaatctcc catctcttca ccaaaatccg atgattga	1068

<210> 2254

<211> 355

<212> PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2254

Met Glu Ser Thr Val Glu Arg Glu Ala Trp Lys Ala His Val Ala Met  
1 5 10 15Ile Gly Val Gln Leu Phe Asn Gly Gly Tyr His Val Ile Thr Lys Val  
20 25 30Ala Leu Asn Val Gly Val Asn Gln Leu Val Phe Cys Val Phe Arg Asp  
35 40 45Leu Ile Ala Leu Ser Ile Leu Ala Pro Leu Ala Tyr Ile Arg Asp Lys  
50 55 60Arg Thr Arg Pro Pro Leu Asn Arg Gln Phe Leu Leu Ala Phe Phe Phe  
65 70 75 80Leu Gly Leu Thr Gly Ile Phe Gly Asn Gln Leu Leu Phe Leu Ile Gly  
85 90 95Leu Asn Tyr Thr Asn Pro Thr Tyr Ala Ala Ala Ile Gln Pro Ser Ile  
100 105 110Pro Val Phe Thr Phe Ile Leu Ala Leu Ile Met Gly Thr Glu Arg Leu  
115 120 125Asn Leu Phe Lys Leu Glu Gly Gln Ala Lys Val Gly Gly Thr Leu Ile  
130 135 140Cys Val Ala Gly Ala Val Leu Met Val Leu Phe Arg Gly Leu Ala Leu  
145 150 155 160Phe Gly Glu Thr Glu Ala Glu Ser Leu Gly His Gly Glu Ser Arg His  
165 170 175Thr Glu Thr Ser Gly His Phe Met His Ala Pro Val Leu Lys Lys Tyr  
180 185 190Pro Ala Asn Leu Ser Val Thr Ala Tyr Ser Tyr Phe Phe Gly Thr Met  
195 200 205Phe Met Val Thr Ser Ala Phe Phe Met Thr Asn Glu Ser Thr Asn Trp  
210 215 220Ser Leu Thr Arg Ser Glu Phe Phe Ala Val Val Tyr Ala Gly Val Ile  
225 230 235 240

Ala Ser Ala Leu Asn Tyr Gly Leu Leu Thr Trp Ser Asn Lys Ile Leu  
245 250 255

Gly Pro Ser Leu Val Ala Leu Tyr Asn Pro Leu Gln Pro Ala Ala Ser  
260 265 270

Ala Phe Leu Ser Arg Ile Phe Leu Gly Ser Pro Ile Tyr Leu Gly Ser  
275 280 285

Ile Leu Gly Gly Cys Ala Ile Ile Ala Gly Leu Tyr Ser Val Thr Trp  
290 295 300

Ala Ser Tyr Lys Glu Lys Lys Ala Ala Ala Ala Met Ala Val Ile Pro  
305 310 315 320

Ile Thr Ser Lys Glu Ala Glu Pro Leu Ile Tyr Lys Asp His Lys Asn  
325 330 335

Lys Pro Ile Gly His Leu Phe Thr Lys Ser Pro Ile Ser Ser Pro Lys  
340 345 350

Ser Asp Asp  
355

<210> 2255

<211> 1434

<212> DNA

<213> Arabidopsis thaliana

<400> 2255  
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tccggcgaac gatatttgga atctgcgcca tcatgtctga gattccgtcg cagcgggtgc 120  
caatgctcgg tgggtggtaa ggagtgacga gtgaaaggag tgaaagcgag acagattatt 180  
gatagtagag ggaatccgac ggtggagggt gatctgatta ccgatgatct gtatcgttcg 240  
gctgttccaa gtggtgcata taccgggatac tacgaagcgc ttgagccttag agatggagac 300  
aagagcgtct atgggtgtaa aggtgtatta caggctatta aaaacatcaa tgaacttggtg 360  
gtccaaaaac tcattggagt tgacgttagg aaccaagctg atgtcgatgc tcttatgctg 420  
gaactggatg ggaccccaaa caagtcgaaa ctcggggcta atgcgatatt aggagtgta 480  
ttgagcgttt gcagggcagg tgctggagct aaaggagtgc ctttgtacaa acacatccag 540

gaaacatcag gaacaaagga gcttgtcatg ccagttcctg cattcaatgt gatcaatgga 600  
 ggcagtcag ctgggaatag tttggctatg caagagtta tgatactacc tgtaggagct 660  
 acctcattct cggaggcctt ccagatggga agtgaagttt atcatacatt gaaggggata 720  
 atcaaaacta agtatggcta agatgcttgt aatgtcggag atgaaggagg gtttgcgccg 780  
 aatgttcaag ataacagaga gggactagtt ctgctcatag atgcaattga aaagccggt 840  
 tacactggaa agatcaaaat aggaatggat gttgctgcat cagaattttt catgaaagat 900  
 ggtagatagc atttgaactt caagaaacag ccaaacgatg gagctcacgt actgtcagcc 960  
 gagagtcttg ctgacctcta cagagaattc atcaaggatt tcccaattgt ctctatcgaa 1020  
 gatccttttg accagatga ttggagctca tgggcttcat tgcaatcctc tgtggatatc 1080  
 caactcgtgg gagatgactt gttagtact aacccgaaga ggatagctga agctattaag 1140  
 aaacagtctt gcaatgctct actcttgaag gttaaccaga ttgggacagt cactgagtc 1200  
 attcaagcag cacttgactc aaaagctgca ggctggggtg tgatggttag tcacaggagt 1260  
 ggcgagacag aggataactt catcgagat ctctctgttg gtttagcaag cggacagatc 1320  
 aaaactggtg ctccatgccg aagtgaacga ttgtcaaat acaaccagct tctccgtatc 1380  
 gaagaggaac tcggcaatgt gcgctacgcc ggtgaagctt tccgatcacc atga 1434

&lt;210&gt; 2256

&lt;211&gt; 477

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2256

Met Ala Leu Thr Thr Lys Pro His His Leu Gln Arg Ser Phe Leu Ser  
 1 5 10 15

Pro Ser Arg Val Ser Gly Glu Arg Tyr Leu Glu Ser Ala Pro Ser Cys  
 20 25 30

Leu Arg Phe Arg Arg Ser Gly Val Gln Cys Ser Val Val Ala Lys Glu  
 35 40 45

Cys Arg Val Lys Gly Val Lys Ala Arg Gln Ile Ile Asp Ser Arg Gly  
 50 55 60

Asn Pro Thr Val Glu Val Asp Leu Ile Thr Asp Asp Leu Tyr Arg Ser  
 65 70 75 80

Ala Val Pro Ser Gly Ala Ser Thr Gly Ile Tyr Glu Ala Leu Glu Leu  
 85 90 95  
 Arg Asp Gly Asp Lys Ser Val Tyr Gly Gly Lys Gly Val Leu Gln Ala  
 100 105 110  
 Ile Lys Asn Ile Asn Glu Leu Val Ala Pro Lys Leu Ile Gly Val Asp  
 115 120 125  
 Val Arg Asn Gln Ala Asp Val Asp Ala Leu Met Leu Glu Leu Asp Gly  
 130 135 140  
 Thr Pro Asn Lys Ser Lys Leu Gly Ala Asn Ala Ile Leu Gly Val Ser  
 145 150 155 160  
 Leu Ser Val Cys Arg Ala Gly Ala Gly Ala Lys Gly Val Pro Leu Tyr  
 165 170 175  
 Lys His Ile Gln Glu Thr Ser Gly Thr Lys Glu Leu Val Met Pro Val  
 180 185 190  
 Pro Ala Phe Asn Val Ile Asn Gly Gly Ser His Ala Gly Asn Ser Leu  
 195 200 205  
 Ala Met Gln Glu Phe Met Ile Leu Pro Val Gly Ala Thr Ser Phe Ser  
 210 215 220  
 Glu Ala Phe Gln Met Gly Ser Glu Val Tyr His Thr Leu Lys Gly Ile  
 225 230 235 240  
 Ile Lys Thr Lys Tyr Gly Gln Asp Ala Cys Asn Val Gly Asp Glu Gly  
 245 250 255  
 Gly Phe Ala Pro Asn Val Gln Asp Asn Arg Glu Gly Leu Val Leu Leu  
 260 265 270  
 Ile Asp Ala Ile Glu Lys Ala Gly Tyr Thr Gly Lys Ile Lys Ile Gly  
 275 280 285  
 Met Asp Val Ala Ala Ser Glu Phe Phe Met Lys Asp Gly Arg Tyr Asp  
 290 295 300  
 Leu Asn Phe Lys Lys Gln Pro Asn Asp Gly Ala His Val Leu Ser Ala  
 305 310 315 320  
 Glu Ser Leu Ala Asp Leu Tyr Arg Glu Phe Ile Lys Asp Phe Pro Ile  
 325 330 335

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Val Ser Ile Glu Asp Pro Phe Asp Gln Asp Asp Trp Ser Trp Ala  
340 345 350

Ser Leu Gln Ser Ser Val Asp Ile Gln Leu Val Gly Asp Asp Leu Leu  
355 360 365

Val Thr Asn Pro Lys Arg Ile Ala Glu Ala Ile Lys Lys Gln Ser Cys  
370 375 380

Asn Ala Leu Leu Leu Lys Val Asn Gln Ile Gly Thr Val Thr Glu Ser  
385 390 395 400

Ile Gln Ala Ala Leu Asp Ser Lys Ala Ala Gly Trp Gly Val Met Val  
405 410 415

Ser His Arg Ser Gly Glu Thr Glu Asp Asn Phe Ile Ala Asp Leu Ser  
420 425 430

Val Gly Leu Ala Ser Gly Gln Ile Lys Thr Gly Ala Pro Cys Arg Ser  
435 440 445

Glu Arg Leu Ser Lys Tyr Asn Gln Leu Leu Arg Ile Glu Glu Glu Leu  
450 455 460

Gly Asn Val Arg Tyr Ala Gly Glu Ala Phe Arg Ser Pro  
465 470 475

<210> 2257

<211> 624

<212> DNA

<213> Arabidopsis thaliana

<400> 2257

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ggtcatgtta aggccaaagg ggtgatttac ttgtctaata tacggatggt cttgttttca	180
agcaagcctg ttgacaactt tgttgctttt gacatgcccc tgctttacat ccatgccgag	240
aaatttaatc agccaatatt tcaactgcaac aatattgctg gacaagtgga gcctgtggg	300
ccagaaaatg agcatagagc tctatattca acacacagtt tcaagatcct atttaaggaa	360
ggtggttgtg ggacatttgt tcctctcttc ttgaatctca tatcatcagt gagacaatac	420
aacagacaaa tgcaacaagc agcagaagca gcagcggcag ctctctatgt tgatctcttc	480

## 047-E2F-PCT.ST25.txt

caagccgctc agacacctgt ggacgaaatg atgagacatg cgtacgtgga ccctaattgat 540  
 ccaacgagga tatatctgca acagccatca ggggaatctc agttgaggcg tagagcttac 600  
 cattcgggtg cgcggaaca ttga 624

<210> 2258

<211> 207

<212> PRT

<213> Arabidopsis thaliana

<400> 2258

Met Ala Leu Asn Pro Gln Leu Leu Pro Asn Gly Met Pro Val Pro Phe  
 1 5 10 15

Val Asn Glu Met Phe Val Leu Val Arg Asp Gly Val Glu Phe Glu Val  
 20 25 30

Asp Lys Ile Pro Gly Gly His Gly Gly His Val Lys Ala Lys Gly Val  
 35 40 45

Ile Tyr Leu Ser Asn Ile Arg Met Val Phe Val Ser Ser Lys Pro Val  
 50 55 60

Asp Asn Phe Val Ala Phe Asp Met Pro Leu Leu Tyr Ile His Ala Glu  
 65 70 75 80

Lys Phe Asn Gln Pro Ile Phe His Cys Asn Asn Ile Ala Gly Gln Val  
 85 90 95

Glu Pro Val Val Pro Glu Asn Glu His Arg Ala Leu Tyr Ser Thr His  
 100 105 110

Ser Phe Lys Ile Leu Phe Lys Glu Gly Gly Cys Gly Thr Phe Val Pro  
 115 120 125

Leu Phe Leu Asn Leu Ile Ser Ser Val Arg Gln Tyr Asn Arg Gln Met  
 130 135 140

Gln Gln Ala Ala Glu Ala Ala Ala Ala Ala Pro His Val Asp Pro Leu  
 145 150 155 160

Gln Ala Ala Gln Thr Pro Val Asp Glu Met Met Arg His Ala Tyr Val  
 165 170 175

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Asp Pro Asn Asp Pro Thr Arg Ile Tyr Leu Gln Gln Pro Ser Gly Glu  
180 185 190

Ser Gln Leu Arg Arg Arg Ala Tyr His Ser Gly Ala Ala Glu His  
195 200 205

<210> 2259

<211> 1053

<212> DNA

<213> Arabidopsis thaliana

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agtaagatag tgacaataac aagcttctca gtgattaaag gcagaggaga accctatgaa      240
tcctctgttt ttgaggtctg tggttacaaa tggagattgg tttgtacgt gaatggtaat      300
aaaaacgacg gtggaatga tcatatttcc ctttacgcaa ggatcgaaga gacaaactct      360
cttccattag gttgggaagt gaatgttgat ctcaaactct ttgtccataa tgggaagcta      420
cacaaatatt tgactgttac agatggctta gtgaagcgat ataacaatgc gaaaaaagaa      480
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gagaaagtta cattcatatc aaacctcca acaaatgttt tcaactggaa gatacttcgt      660
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tacccgattg gaagcggtta tgggtgtgga gtgaacaata tcatactggt agctgattta      960
aacgatgcac caaagggata ttggtgaat gatgccatta tctttgaagc tgaatggtt      1020
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<210> 2260

<211> 350

<212> PRF



<213> *Arabidopsis thaliana*

&lt;400&gt; 2260

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20 25 30Gly Arg Gly Ile Glu Tyr Asn Ser Ser Tyr Ser Leu Glu Glu Asn Leu  
35 40 45Gly Val Thr Arg Glu Leu Arg Glu Glu Arg Pro Ser Ser Lys Ile Val  
50 55 60Thr Ile Thr Ser Phe Ser Val Ile Lys Gly Arg Gly Glu Pro Tyr Glu  
65 70 75 80Ser Ser Val Phe Glu Ala Ala Gly Tyr Lys Trp Arg Leu Val Leu Tyr  
85 90 95Val Asn Gly Asn Lys Asn Asp Gly Gly Asn Asp His Ile Ser Leu Tyr  
100 105 110Ala Arg Ile Glu Glu Thr Asn Ser Leu Pro Leu Gly Trp Glu Val Asn  
115 120 125Val Asp Leu Lys Leu Phe Val His Asn Gly Lys Leu His Lys Tyr Leu  
130 135 140Thr Val Thr Asp Gly Leu Val Lys Arg Tyr Asn Asn Ala Lys Lys Glu  
145 150 155 160Trp Gly Phe Gly Gln Leu Ile Pro Arg Ser Thr Phe Tyr Asn Ala Asn  
165 170 175Glu Gly Tyr Leu Asp Gln Asp Thr Gly Ser Phe Gly Ala Glu Ile Phe  
180 185 190Ile Val Lys Pro Ala Gln Gln Gln Glu Lys Val Thr Phe Ile Ser Asn  
195 200 205Pro Pro Asn Asn Val Phe Thr Trp Lys Ile Leu Arg Phe Ser Thr Leu  
210 215 220Glu Asp Lys Phe Tyr Tyr Ser Asp Asp Phe Leu Val Glu Asp Arg Tyr  
Page 3243

225                      230                      235                      240

Trp Arg Leu Gly Phe Asn Pro Lys Gly Asp Gly Gly Gly Arg Pro His  
245                      250                      255

Ala Leu Pro Ile Phe Leu Phe Ala Gln Gly His Lys Ala Asn Ala Val  
260                      265                      270

Ala Thr Asn Thr Trp Gly Ala Val Asn Leu Arg Leu Lys Asn Gln Arg  
275                      280                      285

Ser Thr Asn His Arg Gln Ile Tyr Ser Ala Ala Trp Tyr Pro Ile Gly  
290                      295                      300

Ser Gly Tyr Gly Val Gly Val Asn Asn Ile Ile Leu Leu Ala Asp Leu  
305                      310                      315                      320

Asn Asp Ala Ser Lys Gly Tyr Leu Val Asn Asp Ala Ile Ile Phe Glu  
325                      330                      335

Ala Glu Met Val Lys Val Ser Ile Thr Asn Ile Val Ser Ala  
340                      345                      350

<210> 2261

<211> 1122

<212> DNA

<213> Arabidopsis thaliana

<400> 2261

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gttctcaaa cgccttcga gcttggtgtc ttgacactc tctacgccg agcctctgc	180
accgactcat tcctctcacc ctatgaata gcaagtaagc taccaactac acctcgtaac	240
cctgaagcgc cggttttgtt ggaccgcatg ctcgtctac tcgctagcta ctccatggtc	300
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gagagattca gcaagctctt taaccagacc ggattcaca tcgcggtcgt taagaaggcc	600
cttgaagtct atgaaggctt caaaggtgtg aaagttttag ttgatgttgg aggaggagtt	660

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ggtaacactc ttggtgtgt tacttctaaa tatcccaata ttaaggggtat caactttgat	720
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atgtttgtgg atgtcccaac cggagatgcc atgatcttga aacgtatact tcatgattgg	840
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aacattgcct ttgacatgga catgttaatg ttcaccaat gttctggtgg aaaagagcga	1020
tcaagagctg agtttgaagc tttagctgca gcttctggct tcaccattg caagtctggt	1080
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<210> 2262

<211> 373

<212> PRT

<213> Arabidopsis thaliana

<400> 2262

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20 25 30

Ala Asn Ala Ala Ala Phe Pro Met Val Leu Lys Ala Ala Leu Glu Leu  
35 40 45

Gly Val Phe Asp Thr Leu Tyr Ala Ala Ala Ser Arg Thr Asp Ser Phe  
50 55 60

Leu Ser Pro Tyr Glu Ile Ala Ser Lys Leu Pro Thr Thr Pro Arg Asn  
65 70 75 80

Pro Glu Ala Pro Val Leu Leu Asp Arg Met Leu Arg Leu Leu Ala Ser  
85 90 95

Tyr Ser Met Val Lys Cys Gly Lys Ala Leu Ser Gly Lys Gly Glu Arg  
100 105 110

Val Tyr Arg Ala Glu Pro Ile Cys Arg Phe Phe Leu Lys Asp Asn Ile  
115 120 125

Gln Asp Ile Gly Ser Leu Ala Ser Gln Val Ile Val Asn Phe Asp Ser  
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130

135

140

Val Phe Leu Asn Thr Trp Ala Gln Leu Lys Asp Val Val Leu Glu Gly  
 145 150 155 160  
 Gly Asp Ala Phe Gly Arg Ala His Gly Gly Met Lys Leu Phe Asp Tyr  
 165 170 175  
 Met Gly Thr Asp Glu Arg Phe Ser Lys Leu Phe Asn Gln Thr Gly Phe  
 180 185 190  
 Thr Ile Ala Val Val Lys Lys Ala Leu Glu Val Tyr Glu Gly Phe Lys  
 195 200 205  
 Gly Val Lys Val Leu Val Asp Val Gly Gly Gly Val Gly Asn Thr Leu  
 210 215 220  
 Gly Val Val Thr Ser Lys Tyr Pro Asn Ile Lys Gly Ile Asn Phe Asp  
 225 230 235 240  
 Leu Thr Cys Ala Leu Ala Gln Ala Pro Ser Tyr Pro Gly Val Glu His  
 245 250 255  
 Val Ala Gly Asp Met Phe Val Asp Val Pro Thr Gly Asp Ala Met Ile  
 260 265 270  
 Leu Lys Arg Ile Leu His Asp Trp Thr Asp Glu Asp Cys Val Lys Ile  
 275 280 285  
 Leu Lys Asn Cys Trp Lys Ser Leu Pro Glu Asn Gly Lys Val Val Val  
 290 295 300  
 Ile Glu Leu Val Thr Pro Asp Glu Ala Glu Asn Gly Asp Ile Asn Ala  
 305 310 315 320  
 Asn Ile Ala Phe Asp Met Asp Met Leu Met Phe Thr Gln Cys Ser Gly  
 325 330 335  
 Gly Lys Glu Arg Ser Arg Ala Glu Phe Glu Ala Leu Ala Ala Ser  
 340 345 350  
 Gly Phe Thr His Cys Lys Phe Val Cys Gln Ala Tyr His Cys Trp Ile  
 355 360 365  
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 370

&lt;210&gt; 2263

&lt;211&gt; 921

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2263

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aactattacc ccgccgttag ctcaagtac atcgccgtag gtaacgaagt atctccgtcg      360
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&lt;210&gt; 2264

&lt;211&gt; 306

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2264

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Asn Pro Thr Ser Gly Glu Ser Val Gly Val Cys Tyr Gly Met Met Gly
20     25     30

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Asn Asn Leu Pro Ser Gln Ser Asp Thr Ile Ala Leu Phe Arg Gln Asn  
 35 40 45  
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 50 55 60  
 Ala Leu Arg Asn Thr Gly Ile Glu Val Ile Ile Gly Val Pro Asn Thr  
 65 70 75 80  
 Asp Leu Arg Ser Leu Thr Asn Pro Ser Ser Ala Arg Ser Trp Leu Gln  
 85 90 95  
 Asn Asn Val Leu Asn Tyr Tyr Pro Ala Val Ser Phe Lys Tyr Ile Ala  
 100 105 110  
 Val Gly Asn Glu Val Ser Pro Ser Asn Gly Gly Asp Val Val Leu Pro  
 115 120 125  
 Ala Met Arg Asn Val Tyr Asp Ala Leu Arg Gly Ala Asn Leu Gln Asp  
 130 135 140  
 Arg Ile Lys Val Ser Thr Ala Ile Asp Met Thr Leu Ile Gly Asn Ser  
 145 150 155 160  
 Phe Pro Pro Ser Ser Gly Glu Phe Arg Gly Asp Val Arg Trp Tyr Ile  
 165 170 175  
 Asp Pro Val Ile Gly Phe Leu Thr Ser Thr Asn Ser Ala Leu Leu Ala  
 180 185 190  
 Asn Ile Tyr Pro Tyr Phe Ser Tyr Val Asp Asn Pro Arg Asp Ile Ser  
 195 200 205  
 Leu Ser Tyr Ala Leu Phe Thr Ser Pro Ser Val Val Val Trp Asp Gly  
 210 215 220  
 Ser Arg Gly Tyr Gln Asn Leu Phe Asp Ala Leu Leu Asp Val Val Tyr  
 225 230 235 240  
 Ser Ala Val Glu Arg Ser Gly Gly Gly Ser Leu Pro Val Val Val Ser  
 245 250 255  
 Glu Ser Gly Trp Pro Ser Asn Gly Gly Asn Ala Ala Ser Phe Asp Asn  
 260 265 270  
 Ala Arg Ser Phe Leu His Glu Ser Cys Val Ala Cys Glu Arg Glu Gln  
 275 280 285

Arg Asn Thr Glu Glu Thr Trp Lys Arg Ser Gly Asn Val Phe Val Arg  
 290 295 300

Tyr Val  
 305

<210> 2265

<211> 1200

<212> DNA

<213> Arabidopsis thaliana

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gactccgccg ttgctcctcc gcttgaatac tgccgtaaac ggcagaagcg tgagacagta    180
gtgctctcga cgttacccgg aaatctagat ctggattcga atgtgaggag tgagaataag    240
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gattcacggg ctgtgctttg tcgtaacggt gttagccatt ctctctccgt agatcacaag    780
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tgtttgatct tggcagtgga tggactatgg gatgtgtgac caaacgagac ggcgtgtggc   1020
gtggctcgca tgtgccttcg aggtgctggg gcgggtgacg actcagatgc ggcgcacaat   1080
gcgtgctccg atcgccgctt gctcttaaca aagttggctc tagcaagaca gagctccgat   1140
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<210> 2266

&lt;211&gt; 399

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2266

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 20 25 30  
 Leu Pro Ser Ile Lys Ile Val Ala Asp Ser Ala Val Ala Pro Pro Leu  
 35 40 45  
 Glu Asn Cys Arg Lys Arg Gln Lys Arg Glu Thr Val Val Leu Ser Thr  
 50 55 60  
 Leu Pro Gly Asn Leu Asp Leu Asp Ser Asn Val Arg Ser Glu Asn Lys  
 65 70 75 80  
 Lys Ala Arg Ser Ala Val Thr Asn Ser Asn Ser Val Thr Glu Ala Glu  
 85 90 95  
 Ser Phe Phe Ser Asp Val Pro Lys Ile Gly Thr Thr Ser Val Cys Gly  
 100 105 110  
 Arg Arg Arg Asp Met Glu Asp Ala Val Ser Ile His Pro Ser Phe Leu  
 115 120 125  
 Gln Arg Asn Ser Glu Asn His His Phe Tyr Gly Val Phe Asp Gly His  
 130 135 140  
 Gly Cys Ser His Val Ala Glu Lys Cys Arg Glu Arg Leu His Asp Ile  
 145 150 155 160  
 Val Lys Lys Glu Val Glu Val Met Ala Ser Asp Glu Trp Thr Glu Thr  
 165 170 175  
 Met Val Lys Ser Phe Gln Lys Met Asp Lys Glu Val Ser Gln Arg Glu  
 180 185 190  
 Cys Asn Leu Val Val Asn Gly Ala Thr Arg Ser Met Lys Asn Ser Cys  
 195 200 205



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Arg Cys Glu Leu Gln Ser Pro Gln Cys Asp Ala Val Gly Ser Thr Ala  
210 215 220

Val Val Ser Val Val Thr Pro Glu Lys Ile Ile Val Ser Asn Cys Gly  
225 230 235 240

Asp Ser Arg Ala Val Leu Cys Arg Asn Gly Val Ala Ile Pro Leu Ser  
245 250 255

Val Asp His Lys Pro Asp Arg Pro Asp Glu Leu Ile Arg Ile Gln Gln  
260 265 270

Ala Gly Gly Arg Val Ile Tyr Trp Asp Gly Ala Arg Val Leu Gly Val  
275 280 285

Leu Ala Met Ser Arg Ala Ile Gly Asp Asn Tyr Leu Lys Pro Tyr Val  
290 295 300

Ile Pro Asp Pro Glu Val Thr Val Thr Asp Arg Thr Asp Glu Asp Gly  
305 310 315 320

Cys Leu Ile Leu Ala Ser Asp Gly Leu Trp Asp Val Val Pro Asn Gly  
325 330 335

Thr Ala Cys Gly Val Ala Arg Met Cys Leu Arg Gly Ala Gly Ala Gly  
340 345 350

Asp Asp Ser Asp Ala Ala His Asn Ala Cys Ser Asp Ala Ala Leu Leu  
355 360 365

Leu Thr Lys Leu Ala Leu Ala Arg Gln Ser Ser Asp Asn Val Ser Val  
370 375 380

Val Val Val Asp Leu Arg Lys Arg Arg Asn Asn Gln Ala Ser Ser  
385 390 395

<210> 2267

<211> 1014

<212> DNA

<213> Arabidopsis thaliana

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attaggtgtc cagaggaatg tccaagcaaa accgctatga actccaagaa caaagtgtgc 180  
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 tacttccatg gaaagagcaa tgaagagttt agcctcgtct ctgactctga ccttcagatc 360  
 aatggtagggt tcattggtca cagaccgcgt ggtcgtgcc gagacttcac atggatccaa 420  
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 gaagaaactc tctccacctg gtactcacca aacaaggaca tcaagatcga gagagtgtgt 600  
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<210> 2268

<211> 337

<212> PRT

<213> *Arabidopsis thaliana*

<400> 2268

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20 25 30

Tyr Thr Arg Cys Tyr Arg Lys Tyr Ile Arg Cys Pro Glu Glu Cys Pro  
35 40 45

Ser Lys Thr Ala Met Asn Ser Lys Asn Lys Val Cys Tyr Ala Asp Cys  
50 55 60

Asp Arg Pro Thr Cys Lys Ser Gln Cys Arg Met Arg Lys Pro Asn Cys  
65 70 75 80

Asn	Arg	Pro	Gly	Ser	Ala	Cys	Tyr	Asp	Pro	Arg	Phe	Ile	Gly	Gly	Asp
			85					84	90					95	
Gly	Ile	Val	Phe	Tyr	Phe	His	Gly	Lys	Ser	Asn	Glu	Glu	Phe	Ser	Leu
			100					105					110		
Val	Ser	Asp	Ser	Asp	Leu	Gln	Ile	Asn	Gly	Arg	Phe	Ile	Gly	His	Arg
			115				120					125			
Pro	Ala	Gly	Arg	Ala	Arg	Asp	Phe	Thr	Trp	Ile	Gln	Ala	Leu	Gly	Phe
						135					140				
Leu	Phe	Asn	Ser	Asn	Lys	Phe	Ser	Leu	Glu	Ala	Ala	Lys	Thr	Ala	Ser
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Trp	Asp	Asn	Glu	Ile	Asp	His	Leu	Lys	Phe	Ser	Tyr	Asp	Gly	Gln	Asp
				165					170					175	
Leu	Ser	Val	Pro	Glu	Glu	Thr	Leu	Ser	Thr	Trp	Tyr	Ser	Pro	Asn	Lys
			180					185					190		
Asp	Ile	Lys	Ile	Glu	Arg	Val	Ser	Met	Arg	Asn	Ser	Val	Ile	Val	Thr
		195					200					205			
Ile	Lys	Asp	Lys	Ala	Glu	Ile	Met	Ile	Asn	Val	Val	Pro	Val	Thr	Lys
		210				215					220				
Glu	Asp	Asp	Arg	Ile	His	Ser	Tyr	Lys	Val	Pro	Ser	Asp	Asp	Cys	Phe
					230					235					240
Ala	His	Leu	Glu	Val	Gln	Phe	Arg	Phe	Phe	Asn	Leu	Ser	Pro	Lys	Val
				245				250						255	
Asp	Gly	Ile	Leu	Gly	Arg	Thr	Tyr	Arg	Pro	Asp	Phe	Gln	Asn	Pro	Ala
			260					265					270		
Lys	Pro	Gly	Val	Ala	Met	Pro	Val	Val	Gly	Gly	Glu	Asp	Ser	Phe	Lys
		275					280					285			
Thr	Ser	Ser	Leu	Leu	Ser	Asn	Asp	Cys	Lys	Thr	Cys	Ile	Phe	Ser	Glu
		290				295					300				
Ser	Gln	Ala	Glu	Ile	Asp	Ser	Val	Lys	Ser	Glu	Ile	Glu	Tyr	Ala	Thr
					310					315					320
Leu	Asp	Cys	Thr	Arg	Gly	Ala	Ser	Ser	Gly	Tyr	Gly	Ile	Val	Cys	Arg
				325					330					335	

Lys

&lt;210&gt; 2269

&lt;211&gt; 831

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2269

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attaacgggc acacgggaca aaagcaagga cttttgtcta cggtcggaaa ctgcacaaat    240
ataaagtggc atgaatgttc tgttgagaaa gttgatagac agagattgct tgatcagaaa    300
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gttgagggtg tcatggatgt accgcttagt gtttgcgagg cgagggatcc aaagggctct    660
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ccaccattga actgcgagat ttctctagga cgtgaaggag gaacttctcc tatcgaaatg    780
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&lt;210&gt; 2270

&lt;211&gt; 276

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2270

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Met Ile Ala Ala Gly Ala Lys Ser Leu Leu Gly Leu Ser Met Ala Ser
1           5           10           15

```

```

Pro Lys Gly Ile Phe Asp Ser Asn Ser Met Ser Asn Ser Arg Ser Val
           20           25           30

```

Val Val Val Arg Ala Cys Val Ser Met Asp Gly Ser Gln Thr Leu Ser  
           35                          40                          45  
 His Asn Lys Asn Gly Ser Ile Pro Glu Val Lys Ser Ile Asn Gly His  
       50                          55                          60  
 Thr Gly Gln Lys Gln Gly Pro Leu Ser Thr Val Gly Asn Ser Thr Asn  
   65                          70                          75                          80  
 Ile Lys Trp His Glu Cys Ser Val Glu Lys Val Asp Arg Gln Arg Leu  
                           85                          90                          95  
 Leu Asp Gln Lys Gly Cys Val Ile Trp Val Thr Gly Leu Ser Gly Ser  
                          100                         105                         110  
 Gly Lys Ser Thr Leu Ala Cys Ala Leu Asn Gln Met Leu Tyr Gln Lys  
                          115                         120                         125  
 Gly Lys Leu Cys Tyr Ile Leu Asp Gly Asp Asn Val Arg His Gly Leu  
                          130                         135                         140  
 Asn Arg Asp Leu Ser Phe Lys Ala Glu Asp Arg Ala Glu Asn Ile Arg  
   145                         150                         155                         160  
 Arg Val Gly Glu Val Ala Lys Leu Phe Ala Asp Ala Gly Ile Ile Cys  
                          165                         170                         175  
 Ile Ala Ser Leu Ile Ser Pro Tyr Arg Thr Asp Arg Asp Ala Cys Arg  
                          180                         185                         190  
 Ser Leu Leu Pro Glu Gly Asp Phe Val Glu Val Phe Met Asp Val Pro  
   195                         200                         205  
 Leu Ser Val Cys Glu Ala Arg Asp Pro Lys Gly Leu Tyr Lys Leu Ala  
   210                         215                         220  
 Arg Ala Gly Lys Ile Lys Gly Phe Thr Gly Ile Asp Asp Pro Tyr Glu  
   225                         230                         235                         240  
 Pro Pro Leu Asn Cys Glu Ile Ser Leu Gly Arg Glu Gly Gly Thr Ser  
                          245                         250                         255  
 Pro Ile Glu Met Ala Glu Lys Val Val Gly Tyr Leu Asp Asn Lys Gly  
                          260                         265                         270  
 Tyr Leu Gln Ala

275

&lt;210&gt; 2271

&lt;211&gt; 273

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2271

```

atggcggtga gaaggggttta cagtgaatc agaggaaga aggtgacgga gcttcaggc    60
tatatcaaat cgactttttc aatggagacc gtgaagacct ctgtgaagag aggactcgat    120
aactacaacg aaaatacat tcagaccagc tccgttgatc ctatccttca tatctgcttc    180
tacggcatgg ctttctctta ccttgtcgct ctccctaatag agcgtcgcca tcttgagcat    240
cagcagcatg ctaaggagca cggtggtcat tga                                273

```

&lt;210&gt; 2272

&lt;211&gt; 90

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2272

```

Met Ala Leu Arg Arg Val Tyr Ser Glu Ile Arg Gly Lys Lys Val Thr
 1          5          10          15
Glu Leu Pro Gly Tyr Ile Lys Ser Thr Phe Ser Met Glu Thr Val Lys
          20          25          30
Thr Ser Val Lys Arg Gly Leu Asp Asn Tyr Asn Glu Lys Tyr Ile Gln
          35          40          45
Thr Ser Ser Val Asp Pro Ile Leu His Ile Cys Phe Tyr Gly Met Ala
          50          55          60
Phe Ser Tyr Leu Val Ala Leu Pro Asn Glu Arg Arg His Leu Glu His
65          70          75          80
Gln Gln His Ala Lys Glu His Gly Gly His
          85          90

```

&lt;210&gt; 2273

&lt;211&gt; 1185

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2273

```

atgtcaatcc ttcaagtctc tacttctgtct ctttcttctt ctactcttct ctccatatct 60
cccgaaaaat ctctctcatc taccaagtca tgcgggatag ttcgatgttc cgtcgagggga 120
actactgtaa ccgagagaaa agtctcggca accagcgagc cacttcttct gagagctgtt 180
aaaggtgaag ttgttgatag acctccgggt tggcttatga ggcaagctgg gaggtacatg 240
aagagtatc aaactctctg tgagaagtat ccttctttca gagatagatc agagaatgca 300
gatcttgggt tggaaatttc ttgacagcca tggaaaggtg ttaagccaga tgggggtgatt 360
ctgttctcag acattctcac tccattgtct ggaatgaaca tacctttcga cattgttaaa 420
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gaattcgtac cagaggaatc tgttccttat gttggagaag cactcagaag attaagaaat 540
gaggtgaaca atgaagccgc tgttctggga ttgttggag ctccatttac actttcttcg 600
tatgtaatcg aaggtggctc atctaagaac ttcacacaga taaaagatt agctttttct 660
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cgctatcaag cagatagcgg agctcaagct gtgcaaatat tcgactcttg ggcaaccgag 780
cttagcccggt tggattttga ggagttagc ttaccttacc tcaaacagat tgtggaagct 840
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gctgaaggaa gagaccggtt aggaagagac atagcagttc aaggaacgt tgatccggga 1020
gttctatttg gatcgaaga atttatcaca agccggattc atgatactgt gaagaaagct 1080
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aatgtagcac acttctttga ggttgctcaa gaaattagat attaa 1185

```

&lt;210&gt; 2274

&lt;211&gt; 394

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2274

Met Ser Ile Leu Gln Val Ser Thr Ser Ser Leu Ser Ser Ser Thr Leu  
Page 3257

1 5 15  
Leu Ser Ile Ser Pro Arg Lys Ser Leu Ser Ser Thr Lys Ser Cys Arg  
20 25 30  
Ile Val Arg Cys Ser Val Glu Gly Thr Thr Val Thr Glu Arg Lys Val  
35 40 45  
Ser Ala Thr Ser Glu Pro Leu Leu Arg Ala Val Lys Gly Glu Val  
50 55 60  
Val Asp Arg Pro Pro Val Trp Leu Met Arg Gln Ala Gly Arg Tyr Met  
65 70 75 80  
Lys Ser Tyr Gln Thr Leu Cys Glu Lys Tyr Pro Ser Phe Arg Asp Arg  
85 90 95  
Ser Glu Asn Ala Asp Leu Val Val Glu Ile Ser Leu Gln Pro Trp Lys  
100 105 110  
Val Phe Lys Pro Asp Gly Val Ile Leu Phe Ser Asp Ile Leu Thr Pro  
115 120 125  
Leu Ser Gly Met Asn Ile Pro Phe Asp Ile Val Lys Gly Lys Gly Pro  
130 135 140  
Ile Ile Phe Asn Pro Pro Gln Ser Ala Ala Asp Val Ala Gln Val Arg  
145 150 155 160  
Glu Phe Val Pro Glu Glu Ser Val Pro Tyr Val Gly Glu Ala Leu Arg  
165 170 175  
Arg Leu Arg Asn Glu Val Asn Asn Glu Ala Ala Val Leu Gly Phe Val  
180 185 190  
Gly Ala Pro Phe Thr Leu Ser Ser Tyr Val Ile Glu Gly Gly Ser Ser  
195 200 205  
Lys Asn Phe Thr Gln Ile Lys Arg Leu Ala Phe Ser Gln Pro Lys Val  
210 215 220  
Leu His Ala Leu Leu Gln Lys Phe Thr Thr Ser Met Ile Thr Tyr Ile  
225 230 235 240  
Arg Tyr Gln Ala Asp Ser Gly Ala Gln Ala Val Gln Ile Phe Asp Ser  
245 250 255



Trp Ala Thr Glu Leu Ser Pro Val Asp Phe Glu Glu Phe Ser Leu Pro  
260 265 270

Tyr Leu Lys Gln Ile Val Glu Ala Val Lys Gln Thr His Pro Asn Leu  
275 280 285

Pro Leu Ile Leu Tyr Ala Ser Gly Ser Gly Gly Leu Leu Glu Arg Leu  
290 295 300

Ala Arg Thr Gly Val Asp Val Val Ser Leu Asp Trp Thr Val Asp Met  
305 310 315 320

Ala Glu Gly Arg Asp Arg Leu Gly Arg Asp Ile Ala Val Gln Gly Asn  
325 330 335

Val Asp Pro Gly Val Leu Phe Gly Ser Lys Glu Phe Ile Thr Ser Arg  
340 345 350

Ile His Asp Thr Val Lys Lys Ala Gly Arg Asp Lys His Ile Leu Asn  
355 360 365

Leu Gly His Gly Ile Lys Val Gly Thr Pro Glu Glu Asn Val Ala His  
370 375 380

Phe Phe Glu Val Ala Gln Glu Ile Arg Tyr  
385 390

<210> 2275

<211> 1425

<212> DNA

<213> Arabidopsis thaliana

<400> 2275

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ccggcaacaa caactctctt ccgctccaga tcttctcgtc ttctcctctc caaagctcaa	180
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ctcctcaacc gcgacatctc cgctcttctt gaatctcgtc gtcgttataa ccgattcgct	360
ctccaaggta tgggtactct gtttctcaga ggaaccaaga gcattgcacga ttgtattgtt	420
gttcatactt cttccgatac tacggaagac gatctccgtc tcttcattgcg cttgatccac	480

```

cgctccgggt tcacttccaa atccgacgtc gttttactct tcaattcggg tacgagattc 540
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tcgtcgaatc aaatcgactc cgtttgggga tttaatctca cgaaattcat gaagaagcaa 660
tcgaaatcat catcgctga gccaatctgg gggaagaaga cgcacgcagc taattacaac 720
gatacgctgt cgttgataa ctcgaccgag tcaaccgagt tgttgacaca tggctcagta 780
gtgggtttcg acgtgactga gttggatcct gaaaactcgc tatccgggtt tatggatcac 840
gttccgataa gtttgagaag atgggcgtgt taccctaagc tgctaggctg agtaagacgc 900
aatttcaaac acgttatgtc cgtggacgct aaaacctcct tgttcctcgg tgaccgccta 960
accgggattc gtaaccggag ccttgagtca gtcctcttct tctctaaaca cagtagtagt 1020
agcaagaaaa gtcgcgaggt taatccggcg attctgacg gtggagctaa aggaatcagg 1080
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aagaagaact cggttacgga atcgggtggt ttgagccaac tcgttgggaa tgttcacatg 1200
acgaagaatt ttgaagtgtg tacgagttag tcggtggtac cggaagcgag ttcactggct 1260
gagttaagga cgagaactc ggcggcttcg tcgataaaga atcatgatat aatacaaaga 1320
ggtggtggtg atagtaatat taatcatatt attgatatta tggcgattat tatgaaacct 1380
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```

&lt;210&gt; 2276

&lt;211&gt; 474

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2276

```

Met Gly Leu Ile Ser Ala Lys Glu Thr Lys Asn Asn Thr Arg Gly Met
1           5           10          15

```

```

Gly Leu Leu Leu Val Phe Phe Pro Asp His His Asn Asn Asn Asp Asp
20          25          30

```

```

Ser Pro Ser Ser Ser Ser Ser Ser Pro Ala Thr Thr Thr Leu Phe Arg
35          40          45

```

```

Ser Arg Ser Ser Arg Leu Leu Leu Ser Lys Ala Gln Ser Thr Ile Ser
50          55          60

```

```

Ile Cys Ile Leu Leu Leu Phe Leu Thr Leu Phe Leu Phe Thr Leu Ser
65          70          75          80

```

047-E2F-PCT.ST25.txt

Thr Phe Glu Pro Ser Ser Gly Phe Pro Ala Val Ser Ser Ser Arg Pro  
85 90 95

His Arg Arg Phe Leu Leu Asn Arg Asp Ile Ser Ala Ser Ser Glu Ser  
100 105 110

Arg Arg Arg Tyr Asn Arg Phe Ala Leu Gln Gly Met Gly Thr Leu Phe  
115 120 125

Leu Arg Gly Thr Lys Ser Met His Asp Leu Ile Val Val His Ile Ser  
130 135 140

Ser Asp Thr Thr Glu Asp Asp Leu Arg Leu Phe Met Arg Leu Ile His  
145 150 155 160

Arg Ser Gly Val Thr Ser Lys Ser Asp Val Val Leu Leu Phe Asn Ser  
165 170 175

Gly Thr Arg Phe Thr Glu Met Ile Glu Glu Glu Asn Asp Ser Phe Leu  
180 185 190

Lys Leu Val Asp Val His Arg Asn Ser Ser Asn Gln Ile Asp Ser Val  
195 200 205

Trp Gly Phe Asn Leu Thr Lys Phe Met Lys Lys Gln Ser Lys Ser Ser  
210 215 220

Ser Ser Glu Pro Ile Trp Gly Lys Lys Thr His Arg Ala Asn Tyr Asn  
225 230 235 240

Asp Thr Ser Ser Leu Asn Asn Ser Thr Glu Ser Thr Glu Leu Leu Thr  
245 250 255

His Gly Ser Val Val Gly Phe Asp Val Thr Glu Leu Asp Pro Glu Asn  
260 265 270

Ser Leu Ser Gly Phe Met Asp His Val Pro Ile Ser Leu Arg Arg Trp  
275 280 285

Ala Cys Tyr Pro Met Leu Leu Gly Arg Val Arg Arg Asn Phe Lys His  
290 295 300

Val Met Leu Val Asp Ala Lys Thr Ser Leu Phe Leu Gly Asp Pro Leu  
305 310 315 320

Thr Arg Ile Arg Asn Arg Ser Leu Glu Ser Val Leu Phe Phe Ser Lys

325

335

His Ser Ser Ser Ser Lys Lys Ser Ser Glu Val Asn Pro Ala Ile Leu  
340 345 350

Ile Gly Gly Ala Lys Gly Ile Arg Arg Leu Ser Ser Ser Met His Thr  
355 360 365

Glu Ile Val Arg Ala Thr Ile Gln Gln Gln His Lys Lys Asn Ser  
370 375 380

Val Thr Glu Ser Val Val Leu Ser Gln Leu Val Gly Asn Val His Met  
385 390 395 400

Thr Lys Asn Phe Glu Val Val Thr Ser Glu Ser Val Val Pro Glu Ala  
405 410 415

Ser Ser Leu Ala Glu Leu Arg Thr Arg Asn Ser Ala Ala Ser Ser Ile  
420 425 430

Lys Asn His Asp Ile Ile Gln Arg Gly Gly Gly Asn Ser Asn Ser Asn  
435 440 445

His Ile Ile Asp Ile Met Ala Ile Ile Met Lys Arg Ile Cys Ser Cys  
450 455 460

Glu Leu Asp Ser Ser Val Tyr Asn Tyr Cys  
465 470

&lt;210&gt; 2277

&lt;211&gt; 1065

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2277

atggctcctt ctgcgcaacc tcttcctgtg agtgtttcgg atgaaaaata tgcgaatgtc 60  
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aatcatggag agagttttca agaggggaag attcttcctt ttgctgattt gcaacttaac 180  
ccttgctgctg ctgttcttca gtatggccag ggtttatatg aaggactgaa agcttacagg 240  
acagaagatg gtcggattct gctattccga ccagacaaa acggtctccg ccttcaagcc 300  
ggagctgaca gactctatat gccttatcct tcggtcgatc aattcgtctc cgccatcaaa 360  
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## 047-E2F-PCT.ST25.txt

```

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acaaactatt gtcctgtttg gataccattg gcagaggcga aaaaacaagg tttctctgat 660
attttgtttt tggatgctgc aactggcaaa aacattgaag aacttttcgc agctaattgt 720
tttatgctca agggcaatgt tgtatcgaca ccaacaattg caggaactat tttgcccgga 780
gtcactcgaa actgcgtaat ggaattgtgt cgtgatttcg gctaccaggt cgaggaacgt 840
acgattcctc tagtggactt tctcgatcgc gacgaagctt tctgtactgg cactgcttcc 900
attgtgacta gtattgcacg cgtaaccttt aaagacaaaa agaccggatt caaacaggg 960
gaagaacat tggctcggaa gctatacgag acgttaagtg atatccagac gggtcggggtc 1020
gaggatacca agggatggac ggtggagatt gaccgccagg gctga 1065

```

&lt;210&gt; 2278

&lt;211&gt; 354

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2278

```

Met Ala Pro Ser Ala Gln Pro Leu Pro Val Ser Val Ser Asp Glu Lys
1      5      10

```

```

Tyr Ala Asn Val Lys Trp Glu Glu Leu Ala Phe Lys Phe Val Arg Thr
20      25      30

```

```

Asp Tyr Met Tyr Val Ala Lys Cys Asn His Gly Glu Ser Phe Gln Glu
35      40      45

```

```

Gly Lys Ile Leu Pro Phe Ala Asp Leu Gln Leu Asn Pro Cys Ala Ala
50      55      60

```

```

Val Leu Gln Tyr Gly Gln Gly Leu Tyr Glu Gly Leu Lys Ala Tyr Arg
65      70      75      80

```

```

Thr Glu Asp Gly Arg Ile Leu Leu Phe Arg Pro Asp Gln Asn Gly Leu
85      90      95

```

```

Arg Leu Gln Ala Gly Ala Asp Arg Leu Tyr Met Pro Tyr Pro Ser Val
100     105     110

```

047-E2F-PCT.ST25.txt

Asp Gln Phe Val Ser Ala Ile Lys Gln Val Ala Leu Ala Asn Lys Lys  
115 120 125

Trp Ile Pro Pro Pro Gly Lys Gly Thr Leu Tyr Ile Arg Pro Ile Leu  
130 135 140

Phe Gly Ser Gly Pro Ile Leu Gly Ser Phe Pro Ile Pro Glu Thr Thr  
145 150 155 160

Phe Thr Ala Phe Ala Cys Pro Val Gly Arg Tyr His Lys Asp Asn Ser  
165 170 175

Gly Leu Asn Leu Lys Ile Glu Asp Gln Phe Arg Arg Ala Phe Pro Ser  
180 185 190

Gly Thr Gly Gly Val Lys Ser Ile Thr Asn Tyr Cys Pro Val Trp Ile  
195 200 205

Pro Leu Ala Glu Ala Lys Lys Gln Gly Phe Ser Asp Ile Leu Phe Leu  
210 215 220

Asp Ala Ala Thr Gly Lys Asn Ile Glu Glu Leu Phe Ala Ala Asn Val  
225 230 235 240

Phe Met Leu Lys Gly Asn Val Val Ser Thr Pro Thr Ile Ala Gly Thr  
245 250 255

Ile Leu Pro Gly Val Thr Arg Asn Cys Val Met Glu Leu Cys Arg Asp  
260 265 270

Phe Gly Tyr Gln Val Glu Glu Arg Thr Ile Pro Leu Val Asp Phe Leu  
275 280 285

Asp Ala Asp Glu Ala Phe Cys Thr Gly Thr Ala Ser Ile Val Thr Ser  
290 295 300

Ile Ala Ser Val Thr Phe Lys Asp Lys Lys Thr Gly Phe Lys Thr Gly  
305 310 315 320

Glu Glu Thr Leu Ala Ala Lys Leu Tyr Glu Thr Leu Ser Asp Ile Gln  
325 330 335

Thr Gly Arg Val Glu Asp Thr Lys Gly Trp Thr Val Glu Ile Asp Arg  
340 345 350

Gln Gly

&lt;210&gt; 2279

&lt;211&gt; 642

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2279

```

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gctactggag aggttgagaa agctaaggaa ttctcccgga cgaagaacaa acgcgcggct    180
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cagctccgta ttcgatgatca aatgattatg ttagaagggtg ctaaagcaac aacgagact    300
gtagatgctt tgaggactgg agcttctgca atgaaagcta tgcagaaagc aacaacatt    360
gatgatgttg acaagacaat ggatgagatc aatgaacaaa ctgagaacat gaaacagatc    420
caagaagcat tgtcggtctc atttggggct aatgattttg atgaggatga attggaagca    480
gaacttgacg aactagaagg cgctgagcta gaagagcaac ttcttcagcc tgttccaatc    540
catgtgcctc aaggaacaaa gcctgctcgt gctccagctc agaagcaacc tactgctgag    600
gaagatgaac tcgctgcctt acaagctgag atggctctct aa                      642

```

&lt;210&gt; 2280

&lt;211&gt; 213

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2280

```

Met Phe Met Asn Arg Leu Phe Gly Lys Pro Lys Gln Glu Thr Ser Thr
 1           5           10           15
Leu Gln Thr Leu Asp Lys Leu Asn Glu Thr Leu Glu Met Leu Glu Lys
          20           25           30
Lys Glu Asn Val Leu Leu Lys Lys Ala Thr Gly Glu Val Glu Lys Ala
          35           40           45
Lys Glu Phe Ser Arg Ala Lys Asn Lys Arg Ala Ala Ile Gln Cys Leu
          50           55           60

```

047-E2F-PCT.ST25.txt

Lys Arg Lys Arg Leu Tyr Glu Gln Gln Val Glu Gln Leu Gly Asn Phe  
65 70 75 80

Gln Leu Arg Ile His Asp Gln Met Ile Met Leu Glu Gly Ala Lys Ala  
85 90 95

Thr Thr Glu Thr Val Asp Ala Leu Arg Thr Gly Ala Ser Ala Met Lys  
100 105 110

Ala Met Gln Lys Ala Thr Asn Ile Asp Asp Val Asp Lys Thr Met Asp  
115 120 125

Glu Ile Asn Glu Gln Thr Glu Asn Met Lys Gln Ile Gln Glu Ala Leu  
130 135 140

Ser Ala Pro Phe Gly Ala Asn Asp Phe Asp Glu Asp Glu Leu Glu Ala  
145 150 155 160

Glu Leu Asp Glu Leu Glu Gly Ala Glu Leu Glu Gln Leu Leu Gln  
165 170 175

Pro Val Pro Ile His Val Pro Gln Gly Asn Lys Pro Ala Arg Ala Pro  
180 185 190

Ala Gln Lys Gln Pro Thr Ala Glu Glu Asp Glu Leu Ala Ala Leu Gln  
195 200 205

Ala Glu Met Ala Leu  
210

<210> 2281

<211> 1788

<212> DNA

<213> Arabidopsis thaliana

<400> 2281  
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cacaaccgaa ccaatcacac cttagtctca tcaccaccga aactccgacc agaaatgact 240  
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047-E2F-PCT.ST25.txt

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ggagaaccgt	ttttcgtagc	tagggatcct	ggtaatccgg	aggcggagga	ggatgatggt	1620
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<210> 2282

<211> 595

<212> PRT

<213> Arabidopsis thaliana

<400> 2282

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Asn His Thr Leu Val Ser Pro Pro Lys Leu Arg Pro Glu Met Thr
          65          70          75
Leu Ala Thr Ala Leu Phe Thr Thr Val Glu Asp Val Ile Asn Thr Phe
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Asp Gly Asp Gly Met Leu His Ala Ile Lys Ile His Asn Gly Lys Ala
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Thr Leu Cys Ser Arg Tyr Val Lys Thr Tyr Lys Tyr Asn Val Glu Lys
          180          185          190
Gln Thr Gly Ala Pro Val Met Pro Asn Val Phe Ser Gly Phe Asn Gly
          195          200          205
Val Thr Ala Ser Val Ala Arg Gly Ala Leu Thr Ala Ala Arg Val Leu
          210          215          220
Thr Gly Gln Tyr Asn Pro Val Asn Gly Ile Gly Leu Ala Asn Thr Ser
          225          230          235          240
Leu Ala Phe Phe Ser Asn Arg Leu Phe Ala Leu Gly Glu Ser Asp Leu
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 305 310 315 320  
 Gln Arg Asp Val Pro Ile Phe Ser Met Thr Ser Pro Ser Phe Leu His  
 325 330 335  
 Asp Phe Ala Ile Thr Lys Arg His Ala Ile Phe Ala Glu Ile Gln Leu  
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 Gly Met Arg Met Asn Met Leu Asp Leu Val Leu Glu Gly Gly Ser Pro  
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 Val Gly Thr Asp Asn Gly Lys Thr Pro Arg Leu Gly Val Ile Pro Lys  
 370 375 380  
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 385 390 395 400  
 Asn Ile Ile His Ala Ile Asn Ala Trp Asp Glu Asp Asp Gly Asn Ser  
 405 410 415  
 Val Val Leu Ile Ala Pro Asn Ile Met Ser Ile Glu His Thr Leu Glu  
 420 425 430  
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 Val Thr Gly Ile Val Arg Arg His Pro Ile Ser Ala Arg Asn Leu Asp  
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 465 470 475 480  
 Tyr Ala Ala Ile Gly Asp Pro Met Pro Lys Ile Ser Gly Val Val Lys  
 485 490 495  
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Met Tyr Gly Ser Gly Cys Tyr Gly Gly Glu Pro Phe Phe Val Ala Arg  
515 520 525

Asp Pro Gly Asn Pro Glu Ala Glu Glu Asp Asp Gly Tyr Val Val Thr  
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Tyr Val His Asp Glu Val Thr Gly Glu Ser Lys Phe Leu Val Met Asp  
545 550 555 560

Ala Lys Ser Pro Glu Leu Glu Ile Val Ala Ala Val Arg Leu Pro Arg  
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Asn Lys Leu  
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<211> 846

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 2284

&lt;211&gt; 281

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2284

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115 120 125Cys Asp Arg Asp Ser Ile Ile Tyr Leu Gly Thr Pro Asp Gly Pro Thr  
130 135 140Cys His Thr Gly Glu Glu Thr Cys Tyr Tyr Thr Ser Val Phe Asp Gln  
145 150 155 160Leu Asn Asn Asp Glu Ala Ser Gly Asn Lys Leu Ala Leu Thr Thr Leu  
165 170 175Tyr Ser Leu Glu Ser Ile Ile Ser Lys Arg Lys Glu Glu Ser Thr Val  
180 185 190

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Pro Gln Glu Gly Lys Pro Ser Trp Thr Arg Arg Leu Leu Thr Asp Asp  
195 200 205

Ala Leu Leu Cys Ser Lys Ile Arg Glu Glu Ala Asp Glu Leu Cys Arg  
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Thr Leu Glu Asp Asn Glu Glu Val Ser Arg Thr Pro Ser Glu Met Ala  
225 230 235 240

Asp Val Leu Tyr His Ala Met Val Leu Leu Ser Lys Arg Gly Val Lys  
245 250 255

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<211> 2424

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<213> Arabidopsis thaliana

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<210> 2286

<211> 807

<212> PRT

<213> Arabidopsis thaliana

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65 70 75 80Asp Asp Thr Phe Ser Pro Ser Asp Ala Ala Thr Ala Ala Val Leu Thr  
85 90 95Gly Lys Asp Ser Thr Ser Thr Thr Ile Val Glu Glu Val Met Glu Pro  
100 105 110Asp Glu Ile Gly Leu Pro Ser Val Lys Ile Thr Glu Ala Ala Thr Gly  
115 120 125Thr Ala Arg Asn Gly Gly Ser Pro Arg Thr Val Ser Ser Pro Arg  
130 135 140Phe Ser Gly Ser Pro Val Ser Thr Gly Thr Pro Lys Asn Val Asp Ser  
145 150 155 160His Arg Gly Leu Ile Asp Thr Ala Ala Pro Phe Glu Ser Val Lys Glu  
165 170 175Ala Val Ser Lys Phe Gly Gly Ile Thr Asp Trp Lys Ser His Arg Met  
180 185 190Gln Ala Val Glu Arg Arg Lys Leu Ile Glu Glu Glu Leu Lys Lys Ile  
195 200 205His Glu Glu Ile Pro Glu Tyr Lys Thr His Ser Glu Thr Ala Glu Ala  
210 215 220Ala Lys Leu Gln Val Leu Lys Glu Leu Glu Ser Thr Lys Arg Leu Ile  
225 230 235 240



047-E2F-PCT.ST25.txt

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 275 280 285  
 Val Ala Lys Ala Arg His Thr Thr Ala Ile Thr Glu Leu Ser Ser Val  
 290 295 300  
 Lys Glu Glu Leu Glu Thr Leu His Lys Glu Tyr Asp Ala Leu Val Gln  
 305 310 315 320  
 Asp Lys Asp Val Ala Val Lys Lys Val Glu Glu Ala Met Leu Ala Ser  
 325 330 335  
 Lys Glu Val Glu Lys Thr Val Glu Glu Leu Thr Ile Glu Leu Ile Ala  
 340 345 350  
 Thr Lys Glu Ser Leu Glu Ser Ala His Ala Ser His Leu Glu Ala Glu  
 355 360 365  
 Glu Gln Arg Ile Gly Ala Ala Met Ala Arg Asp Gln Asp Thr His Arg  
 370 375 380  
 Trp Glu Lys Glu Leu Lys Gln Ala Glu Glu Glu Leu Gln Arg Leu Asn  
 385 390 395 400  
 Gln Gln Ile His Ser Ser Lys Asp Leu Lys Ser Lys Leu Asp Thr Ala  
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 Ser Ala Leu Leu Leu Asp Leu Lys Ala Glu Leu Val Ala Tyr Met Glu  
 420 425 430  
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 450 455 460  
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 465 470 475 480  
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Leu Glu Lys Glu Lys Ser Thr Leu Ala Ser Ile Lys Gln Arg Glu Gly  
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Met Ala Ser Ile Ala Val Ala Ser Ile Glu Ala Glu Ile Asp Arg Thr  
515 520 525

Arg Ser Glu Ile Ala Ser Val Gln Ser Lys Glu Lys Asp Ala Arg Glu  
530 535 540

Lys Met Val Glu Leu Pro Lys Gln Leu Gln Gln Ala Ala Glu Glu Ala  
545 550 555 560

Asp Glu Ala Lys Ser Leu Ala Glu Val Ala Arg Glu Glu Leu Arg Lys  
565 570 575

Ala Lys Glu Glu Ala Glu Gln Ala Lys Ala Gly Ala Ser Thr Met Glu  
580 585 590

Ser Arg Leu Phe Ala Ala Gln Lys Glu Ile Glu Ala Ala Lys Ala Ser  
595 600 605

Glu Arg Leu Ala Leu Ala Ala Ile Lys Ala Leu Glu Glu Ser Glu Ser  
610 615 620

Thr Leu Lys Ala Asn Asp Thr Asp Ser Pro Arg Ser Val Thr Leu Ser  
625 630 635 640

Leu Glu Glu Tyr Tyr Glu Leu Ser Lys Arg Ala His Glu Ala Glu Glu  
645 650 655

Leu Ala Asn Ala Arg Val Ala Ala Ala Val Ser Arg Ile Glu Glu Ala  
660 665 670

Lys Glu Thr Glu Met Arg Ser Leu Glu Lys Leu Glu Glu Val Asn Arg  
675 680 685

Asp Met Asp Ala Arg Lys Lys Ala Leu Lys Glu Ala Thr Glu Lys Ala  
690 695 700

Glu Lys Ala Lys Glu Gly Lys Leu Gly Val Glu Gln Glu Leu Arg Lys  
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Trp Arg Ala Glu His Glu Gln Lys Arg Lys Ala Gly Asp Gly Val Asn  
725 730 735

Thr Glu Lys Asn Leu Lys Glu Ser Phe Glu Gly Gly Lys Met Glu Gln  
 740 745 750

Ser Pro Glu Ala Val Val Tyr Ala Ser Ser Pro Ser Glu Ser Tyr Gly  
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Thr Glu Glu Asn Ser Glu Thr Asn Leu Ser Pro Gln Thr Lys Ser Arg  
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Lys Lys Lys Ser His Asn Asn  
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<211> 1737

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 2288

&lt;211&gt; 578

&lt;212&gt; PR1

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2288

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Lys Arg Ser Arg Ile Ile Glu Leu Ser Arg Arg Leu Arg His Arg Gly
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Pro Asp Trp Ser Gly Leu His Cys Tyr Glu Asp Cys Tyr Leu Ala His
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Glu Arg Leu Ala Ile Val Asp Pro Thr Ser Gly Asp Gln Pro Leu Tyr
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Asn Glu Asp Lys Thr Ile Ala Val Thr Val Asn Gly Glu Ile Tyr Asn
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His Lys Ala Leu Arg Glu Asn Leu Lys Ser His Gln Phe Arg Thr Gly
85      90      95

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 245 250 255  
 Gln Trp Gly Ser Lys Leu His Thr Phe Cys Ile Gly Leu Lys Gly Ser  
 260 265 270  
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 275 280 285  
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047-E2F-PCT.ST25.txt

Leu Tyr Phe His Lys Ala Pro Asn Lys Lys Glu Phe His Glu Glu Thr  
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&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2289

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&lt;210&gt; 2290

&lt;211&gt; 348

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2290

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Arg Ser Ser Ile Ser Ala Pro Gln Thr Gln Thr Ile Asn Thr Glu Lys
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Leu Glu Asp Lys Phe Gly Arg Lys Gly Ile Lys Phe Ser Glu Ser Asn  
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Asn Ile Pro Met Val Glu Leu Lys Val Arg Asn Gly Ser Ser Leu Lys  
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Leu Ser Leu Ser Asp Ala His Val Leu Ser Tyr Lys Pro Lys Val Tyr  
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Glu Ser Arg Gly Gly Val Gly Val Val Ile Val Asn Gly Glu Glu Pro  
100 105 110

Lys Gly Gly Ser Ser Val Ile Ser Gly Cys Asp Trp Ser Val Lys Asp  
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Ala Gly Val Leu Asp Ile Thr Tyr Ile Val Ser Leu Tyr Pro Val Ser  
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Leu Lys Pro Gly Ile Met Ser Tyr Leu Arg Phe Lys Lys Arg Ser Gly  
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195 200 205

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Arg Ile Tyr Gly Ala Pro Pro Ala Glu Arg Leu Lys Ala Val Tyr Asn  
260 265 270



Thr Pro Pro Ser Lys Phe Glu Thr Ile Asp Gln Gly Arg Gly Leu Phe  
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Gly Ser Met Trp Asp Lys Tyr Gly Lys Gln His Tyr Phe Val Cys Thr  
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<211> 759

<212> DNA

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<210> 2292

<211> 252

<212> PRT

<213> *Arabidopsis thaliana*

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35 40 45Tyr Gly Asp Leu Tyr Ser Ala Gly Tyr Gly Thr Met Thr Ala Ala Leu  
50 55 60Ser Thr Ala Leu Phe Asn Asp Gly Ala Ser Cys Gly Glu Cys Tyr Arg  
65 70 75 80Ile Thr Cys Asp His Ala Ala Asp Ser Arg Trp Cys Leu Lys Gly Ala  
85 90 95Ser Val Val Ile Thr Ala Thr Asn Phe Cys Pro Pro Asn Phe Ala Leu  
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115 120 125Met Ala Gln Pro Ala Trp Glu Lys Ile Gly Ile Tyr Arg Gly Gly Ile  
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165 170 175Asn Val Gly Gly Ala Gly Ser Ile Lys Ser Val Ser Ile Lys Gly Ser  
180 185 190Lys Thr Gly Trp Leu Ala Met Ser Arg Asn Trp Gly Ala Asn Trp Gln  
195 200 205Ser Asn Ala Tyr Leu Asp Gly Gln Ala Leu Ser Phe Ser Ile Thr Thr  
210 215 220

Thr Asp Gly Ala Thr Arg Val Phe Leu Asn Val Val Pro Ser Ser Trp  
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<210> 2293

<211> 1398

<212> DNA

<213> *Arabidopsis thaliana*

<400> 2293

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catgttgctc ctgtgtctct gaattctatct ggaagcgat catcatctgt taaaccttta      180
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<213> Arabidopsis thaliana

<400> 2294

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 35 40 45

Leu Ser Gly Lys Arg Ser Ser Ser Val Lys Pro Leu Asn Ala Glu Pro  
 50 55 60

Lys Thr Lys Asp Ser Met Ile Pro Leu Ala Ala Thr Met Val Ala Glu  
 65 70 75 80

Ile Ala Glu Glu Val Glu Val Val Glu Ile Glu Asp Phe Glu Glu Leu  
 85 90 95

Ala Lys Lys Leu Glu Asn Ala Ser Pro Leu Glu Ile Met Asp Lys Ala  
 100 105 110

Leu Glu Lys Tyr Gly Asn Asp Ile Ala Ile Ala Phe Ser Gly Ala Glu  
 115 120 125

Asp Val Ala Leu Ile Glu Tyr Ala His Leu Thr Gly Arg Pro Phe Arg  
 130 135 140

Val Phe Ser Leu Asp Thr Gly Arg Leu Asn Pro Glu Thr Tyr Arg Phe  
 145 150 155 160

Phe Asp Ala Val Glu Lys His Tyr Gly Ile Arg Ile Glu Tyr Met Phe  
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Pro Asp Ser Val Glu Val Gln Gly Leu Val Arg Ser Lys Gly Leu Phe  
 180 185 190

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Ser Phe Tyr Glu Asp Gly His Gln Glu Cys Cys Arg Val Arg Lys Val  
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Arg Pro Leu Arg Arg Ala Leu Lys Gly Leu Lys Ala Trp Ile Thr Gly  
210 215 220

Gln Arg Lys Asp Gln Ser Pro Gly Thr Arg Ser Glu Ile Pro Val Val  
225 230 235 240

Gln Val Asp Pro Val Phe Glu Gly Leu Asp Gly Gly Val Gly Ser Leu  
245 250 255

Val Lys Trp Asn Pro Val Ala Asn Val Glu Gly Asn Asp Val Trp Asn  
260 265 270

Phe Leu Arg Thr Met Asp Val Pro Val Asn Thr Leu His Ala Ala Gly  
275 280 285

Tyr Ile Ser Ile Gly Cys Glu Pro Cys Thr Lys Ala Val Leu Pro Gly  
290 295 300

Gln His Glu Arg Glu Gly Arg Trp Trp Trp Glu Asp Ala Lys Ala Lys  
305 310 315 320

Glu Cys Gly Leu His Lys Gly Asn Val Lys Glu Asn Ser Asp Asp Ala  
325 330 335

Lys Val Asn Gly Glu Ser Lys Ser Ala Val Ala Asp Ile Phe Lys Ser  
340 345 350

Glu Asn Leu Val Thr Leu Ser Arg Gln Gly Ile Glu Asn Leu Met Lys  
355 360 365

Leu Glu Asn Arg Lys Glu Pro Trp Ile Val Val Leu Tyr Ala Pro Trp  
370 375 380

Cys Pro Phe Cys Gln Ala Met Glu Ala Ser Tyr Asp Glu Leu Ala Asp  
385 390 395 400

Lys Leu Ala Gly Ser Gly Ile Lys Val Ala Lys Phe Arg Ala Asp Gly  
405 410 415

Asp Gln Lys Glu Phe Ala Lys Gln Glu Leu Gln Leu Gly Ser Phe Pro  
420 425 430

Thr Ile Leu Val Phe Pro Lys Asn Ser Ser Arg Pro Ile Lys Tyr Pro  
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435 047-E2F-PCT.ST25.txt 445  
440

Ser Glu Lys Arg Asp Val Glu Ser Leu Thr Ser Phe Leu Asn Leu Val  
450 455 460

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465

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Gln Asp Ser Lys Ala Ser Pro Ala Arg Lys Pro Trp Tyr Gln Arg Ala  
35 40 45

Met Ala Val Ala Arg Phe Ala Thr Asn Trp Arg Thr Ile Pro Lys Ser  
50 55 60

Ser Ser Gln Gln Gln Pro Glu Asn Phe Arg Pro Ser Arg Asn Pro Ser  
65 70 75 80

Val Asn Ser Lys Ser Ser Asn His Asn Gln Ile Tyr His Gln Leu Arg  
85 90 95

Lys Cys Ser Ser Leu Lys Val Ala Ala Asn Ser Phe Thr Arg Val Cys  
100 105 110

Leu Cys Ala Pro Ile Gly Pro Tyr Asp Asp Val Phe Arg Ile His Val  
115 120 125

Pro Pro Arg Arg Ser Ser Ser Tyr Pro Pro Ser Lys Pro Leu Pro Met  
130 135 140

Glu Thr Ala Val Ala Val Ala Thr Ala Arg Met Ser Val Asp Ser Gly  
145 150 155 160

Arg Arg Ile Phe Arg Gly Lys Ser Leu Arg Glu Asn Ala Leu Met Arg  
165 170 175

Arg Phe Val Val Ala Glu Glu Glu Ala Ile Met Glu Asn Arg Lys Arg  
180 185 190

Asp Gln Met Glu Ile Val Arg Lys Arg Asn Gln Met Arg Arg Lys Lys  
195 200 205

Lys Leu Gly Pro Ser Pro Leu Ser Arg Met Val Ile Ala Glu Asp Gln  
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Glu Val Cys Leu Leu  
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<211> 367

<212> PRT

<213> *Arabidopsis thaliana*

<400> 2298

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 Trp Lys Asn Tyr Leu Lys Pro Gly Ile Lys Lys Gly Ser Leu Thr Glu  
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 85 90 95  
 Gly Lys Trp Trp Glu Val Phe Lys Glu Lys Gln Gln Arg Glu Glu Lys  
 100 105 110  
 Glu Ser Asn Lys Arg Val Glu Pro Ile Asp Glu Ser Lys Tyr Asp Arg  
 115 120 125  
 Ile Leu Glu Ser Phe Ala Glu Lys Leu Val Lys Glu Arg Ser Asn Val  
 130 135 140  
 Val Pro Ala Ala Ala Ala Ala Ala Thr Val Val Met Ala Asn Ser Asn  
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 Gly Gly Phe Leu His Ser Glu Gln Gln Val Gln Pro Pro Asn Pro Val  
 165 170 175  
 Ile Pro Pro Trp Leu Ala Thr Ser Asn Asn Gly Asn Asn Val Val Ala  
 180 185 190  
 Arg Pro Pro Ser Val Thr Leu Thr Leu Ser Pro Ser Thr Val Ala Ala  
 195 200 205  
 Ala Ala Pro Gln Pro Pro Ile Pro Trp Leu Gln Gln Gln Pro Glu  
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 Arg Ala Glu Asn Gly Pro Gly Gly Leu Val Leu Gly Ser Met Met Pro  
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 Ser Cys Ser Gly Ser Ser Glu Ser Val Phe Leu Ser Glu Leu Val Glu  
 245 250 255  
 Cys Cys Arg Glu Leu Glu Glu Gly His Arg Ala Trp Ala Asp His Lys  
 260 265 270  
 Lys Glu Ala Ala Trp Arg Leu Arg Arg Leu Glu Leu Gln Leu Glu Ser  
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Glu Lys Thr Cys Arg Gln Arg Glu Lys Met Glu Glu Ile Glu Ala Lys  
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 Gly Glu Tyr Arg Glu Gln Leu Val Gly Leu Arg Arg Asp Ala Glu Ala  
 325 330 335  
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<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 2300

&lt;211&gt; 865

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2300

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Leu Ala Pro Arg Glu Ser Pro Tyr Asn Glu Ala Lys Thr Gly Leu Thr  
 35 40 45

Tyr Thr Ser Asp Asp Gly Leu Val Asn Val Gly Lys Pro Gly Arg Ile  
 50 55 60

Ala Lys Glu Phe Glu Pro Leu Ala Asp Lys Pro Thr Leu Thr Leu Arg  
 65 70 75 80

Tyr Phe Pro Glu Gly Val Arg Asn Cys Tyr Asn Leu Asn Val Thr Ser  
 85 90 95

Asp Thr Asn Tyr Leu Ile Lys Ala Thr Phe Val Tyr Gly Asn Tyr Asp  
 100 105 110

Gly Leu Asn Val Gly Pro Asn Phe Asp Leu Tyr Phe Gly Pro Asn Leu  
 115 120 125

Trp Thr Thr Val Cys Leu Ile Lys Thr Gly Ile Ser Ile Pro Phe Ile  
 130 135 140

Asn Val Leu Glu Leu Arg Pro Met Lys Lys Asn Met Tyr Val Thr Gln  
 145 150 155 160

Gly Glu Ser Leu Asn Tyr Leu Phe Arg Val Tyr Ile Ser Asn Ser Ser  
 165 170 175

Thr Arg Ile Arg Phe Pro Asp Asp Val Tyr Asp Arg Lys Trp Tyr Pro  
 180 185 190

Tyr Phe Asp Asn Ser Trp Thr Gln Val Thr Thr Thr Leu Asp Val Asn  
 195 200 205

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 210 215 220

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Thr Pro Ile Lys Ala Asn Asp Thr Leu Asn Ile Thr Trp Thr Val Glu  
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Pro Pro Thr Thr Lys Phe Tyr Ser Tyr Met His Phe Ala Glu Leu Gln  
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Thr Leu Arg Ala Asn Asp Ala Arg Glu Phe Asn Val Thr Met Asn Gly  
 260 265 270

Ile Tyr Thr Tyr Gly Pro Tyr Ser Pro Lys Pro Leu Lys Thr Glu Thr  
 275 280 285

Ile Tyr Asp Lys Ile Pro Glu Gln Cys Asp Gly Gly Ala Cys Leu Leu  
 290 295 300

Gln Val Val Lys Thr Leu Lys Ser Thr Leu Pro Pro Leu Leu Asn Ala  
 305 310 315 320

Ile Glu Ala Phe Thr Val Ile Asp Phe Pro Gln Met Glu Thr Asn Gly  
 325 330 335

Asp Asp Val Asp Ala Ile Lys Asn Val Gln Asp Thr Tyr Gly Ile Ser  
 340 345 350

Arg Ile Ser Trp Gln Gly Asp Pro Cys Val Pro Lys Leu Phe Leu Trp  
 355 360 365

Asp Gly Leu Asn Cys Asn Asn Ser Asp Asn Ser Thr Ser Pro Ile Ile  
 370 375 380

Thr Ser Leu Asp Leu Ser Ser Ser Gly Leu Thr Gly Ser Ile Thr Gln  
 385 390 395 400

Ala Ile Gln Asn Leu Thr Asn Leu Gln Glu Leu Asp Leu Ser Asp Asn  
 405 410 415

Asn Leu Thr Gly Glu Ile Pro Asp Phe Leu Gly Asp Ile Lys Ser Leu  
 420 425 430

Leu Val Ile Asn Leu Ser Gly Asn Asn Leu Ser Gly Ser Val Pro Pro  
 435 440 445

Ser Leu Leu Gln Lys Lys Gly Met Lys Leu Asn Val Glu Gly Asn Pro  
 450 455 460

His Leu Leu Cys Thr Ala Asp Ser Cys Val Lys Lys Gly Glu Asp Gly  
 465 470 475 480

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His Lys Lys Lys Ser Val Ile Val Pro Val Val Ala Ser Ile Ala Ser  
 485 490 495  
 Ile Ala Val Leu Ile Gly Ala Leu Val Leu Phe Phe Ile Leu Arg Lys  
 500 505 510  
 Lys Lys Ser Pro Lys Val Glu Gly Pro Pro Pro Ser Tyr Met Gln Ala  
 515 520 525  
 Ser Asp Gly Arg Ser Pro Arg Ser Ser Glu Pro Ala Ile Val Thr Lys  
 530 535 540  
 Asn Arg Arg Phe Thr Tyr Ser Gln Val Ala Ile Met Thr Asn Asn Phe  
 545 550 555 560  
 Gln Arg Ile Leu Gly Lys Gly Gly Phe Gly Met Val Tyr His Gly Phe  
 565 570 575  
 Val Asn Gly Thr Glu Gln Val Ala Val Lys Ile Leu Ser His Ser Ser  
 580 585 590  
 Ser Gln Gly Tyr Lys Glu Phe Lys Ala Glu Val Glu Leu Leu Arg  
 595 600 605  
 Val His His Lys Asn Leu Val Gly Leu Val Gly Tyr Cys Asp Glu Gly  
 610 615 620  
 Glu Asn Met Ala Leu Ile Tyr Glu Tyr Met Ala Asn Gly Asp Leu Lys  
 625 630 635 640  
 Glu His Met Ser Gly Thr Arg Asn Arg Phe Thr Leu Asn Trp Gly Thr  
 645 650 655  
 Arg Leu Lys Ile Val Val Glu Ser Ala Gln Gly Leu Glu Tyr Leu His  
 660 665 670  
 Asn Gly Cys Lys Pro Pro Met Val His Arg Asp Val Lys Thr Thr Asn  
 675 680 685  
 Ile Leu Leu Asn Glu His Phe Gln Ala Lys Leu Ala Asp Phe Gly Leu  
 690 695 700  
 Ser Arg Ser Phe Pro Ile Glu Gly Glu Thr His Val Ser Thr Val Val  
 705 710 715 720  
 Ala Gly Thr Pro Gly Tyr Leu Asp Pro Glu Tyr Tyr Lys Thr Asn Trp  
 725 730 735

Leu Thr Glu Lys Ser Asp Val Tyr Ser Phe Gly Ile Val Leu Leu Glu  
 740 745 750

Leu Ile Thr Asn Arg Pro Val Ile Asp Lys Ser Arg Glu Lys Pro His  
 755 760 765

Ile Ala Glu Trp Val Gly Val Met Leu Thr Lys Gly Asp Ile Asn Ser  
 770 775 780

Ile Met Asp Pro Asn Leu Asn Glu Asp Tyr Asp Ser Gly Ser Val Trp  
 785 790 795 800

Lys Ala Val Glu Leu Ala Met Ser Cys Leu Asn Pro Ser Ser Ala Arg  
 805 810 815

Arg Pro Thr Met Ser Gln Val Val Ile Glu Leu Asn Glu Cys Ile Ala  
 820 825 830

Ser Glu Asn Ser Arg Gly Gly Ala Ser Arg Asp Met Asp Ser Lys Ser  
 835 840 845

Ser Ile Glu Val Ser Leu Thr Phe Asp Thr Glu Leu Ser Pro Thr Ala  
 850 855 860

Arg  
 865

<210> 2301

<211> 810

<212> DNA

<213> Arabidopsis thaliana

<400> 2301

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gataataaga tattggtttt gggaggaaat ggttatgtag gttcacacat atgtaaggag	180
gcactgagac aagggtttctc tgtatctagt cttagcaggt ctggaagatc ttctcttcac	240
gattcgtggg tcgatgatgt aacctggcat caaggtgatt tgctttcacc cgattctctg	300
aagcctgcac tagaaggaat tacatctgtg atttcatgtg ttggtgggtt tgggtccaac	360
tcacaaatgg tcagaattaa cggtagtgca aacatcaatg ctgttaaagc tgcagcagaa	420

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caaggtgtga agagatttgt gtatatatca gctgcggtatt ttggtgtcat aaataacttg      480
attcgaggat atttcgaagg gaagagagca accgaagctg agatttttga taaatttggg      540
aacagaggtt cggttttaag gccaggattc atacatggga ctgctcaggt cggtagcata      600
aagctgccac ttagtctcat tggagctcct ctcgaaatgg ttttgaagct gttgcaaaaa      660
gaggtgacga aaattcctgt gatcggggcca cttttaatac ctccgggtcaa tgtcaaatcc      720
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&lt;210&gt; 2302

&lt;211&gt; 269

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2302

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Met Leu Arg Ser Leu Ile Trp Lys Arg Ser Gln Ala Tyr Ser Ser Val
1      5      10
Val Thr Met Ser Ser Ile Ser Gln Arg Gly Asn Glu Arg Leu Leu Ser
20     25     30
Glu Val Ala Gly Ser His Ser Arg Asp Asn Lys Ile Leu Val Leu Gly
35     40     45
Gly Asn Gly Tyr Val Gly Ser His Ile Cys Lys Glu Ala Leu Arg Gln
50     55     60
Gly Phe Ser Val Ser Ser Leu Ser Arg Ser Gly Arg Ser Ser Leu His
65     70     75     80
Asp Ser Trp Val Asp Asp Val Thr Trp His Gln Gly Asp Leu Leu Ser
85     90     95
Pro Asp Ser Leu Lys Pro Ala Leu Glu Gly Ile Thr Ser Val Ile Ser
100    105    110
Cys Val Gly Gly Phe Gly Ser Asn Ser Gln Met Val Arg Ile Asn Gly
115    120    125
Thr Ala Asn Ile Asn Ala Val Lys Ala Ala Ala Glu Gln Gly Val Lys
130    135    140

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Arg Phe Val Tyr Ile Ser Ala Ala Asp Phe Gly Val Ile Asn Asn Leu  
145 150 155 160

Ile Arg Gly Tyr Phe Glu Gly Lys Arg Ala Thr Glu Ala Glu Ile Leu  
165 170 175

Asp Lys Phe Gly Asn Arg Gly Ser Val Leu Arg Pro Gly Phe Ile His  
180 185 190

Gly Thr Arg Gln Val Gly Ser Ile Lys Leu Pro Leu Ser Leu Ile Gly  
195 200 205

Ala Pro Leu Glu Met Val Leu Lys Leu Leu Pro Lys Glu Val Thr Lys  
210 215 220

Ile Pro Val Ile Gly Pro Leu Leu Ile Pro Pro Val Asn Val Lys Ser  
225 230 235 240

Val Ala Ala Thr Ala Val Lys Ala Ala Val Asp Pro Glu Phe Ala Ser  
245 250 255

Gly Val Ile Asp Val Tyr Arg Ile Leu Gln His Gly His  
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<210> 2303

<211> 1077

<212> DNA

<213> Arabidopsis thaliana

<400> 2303

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gaggtagaag aatctgtttc ccagatctta ggtcaatctc gtcacgttct ctctttcgtc	180
cgcttcactc accgatatgg taaaaagtat cagaacgtgg aggagatgaa gcttcgattc	240
tcgattttca aggagaatct tgatttgatc agatccacca acaagaaagg cttatcttac	300
aaactcgggtg ttaatcaatt tgctgatttg acatggcaag agtttcaaag gaccaagctt	360
ggtgctgctc agaactgctc tgccacttta aagggcagcc acaaggtcac agaagcagct	420
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gcatttggaa aaggaatttc tctctctgag caacagcttg tggattgtgc tggagcttcc	600

aataactatg gttgcaatgg tggccttcct tctcaagcct ttgaatacat caaatccaac 660  
ggtggcctcg acacagagaa agcttatcct tataccggta aagatgaaac ctgcaaatTT 720  
tcagctgaaa acgttggtgt acaagtcctc aactcagta acattactct ggtgctgaa 780  
gatgaactga agcatgCGGT tggattggta cggccagtaa gcatagcatt tgaggttata 840  
cactcgttcc ggctttacaa gagtggagtt tacactgata gtcactgtgg aagtactcca 900  
atggatgtga accacgcggt tttggccggt ggttatggag ttgaagacgg tgtaccatat 960  
tggcttatta agaactcatg gggagcggat tggggcgaca aaggttactt caagatggag 1020  
atggggaaga acatgtgtgg tattgctaca tgtgcatcat acccgttgt ggcttga 1077

<210> 2304

<211> 358

<212> PRT

<213> Arabidopsis thaliana

<400> 2304

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20 25 30

Arg Met Val Ser Asp Gly Leu Arg Glu Val Glu Glu Ser Val Ser Gln  
35 40 45

Ile Leu Gly Gln Ser Arg His Val Leu Ser Phe Ala Arg Phe Thr His  
50 55 60

Arg Tyr Gly Lys Lys Tyr Gln Asn Val Glu Glu Met Lys Leu Arg Phe  
65 70 75 80

Ser Ile Phe Lys Glu Asn Leu Asp Leu Ile Arg Ser Thr Asn Lys Lys  
85 90 95

Gly Leu Ser Tyr Lys Leu Gly Val Asn Gln Phe Ala Asp Leu Thr Trp  
100 105 110

Gln Glu Phe Gln Arg Thr Lys Leu Gly Ala Ala Gln Asn Cys Ser Ala  
115 120 125

Thr Leu Lys Gly Ser His Lys Val Thr Glu Ala Ala Leu Pro Glu Thr  
130 135 140

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Lys Asp Trp Arg Glu Asp Gly Ile Val Ser Pro Val Lys Asp Gln Gly  
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 Gly Cys Gly Ser Cys Trp Thr Phe Ser Thr Thr Gly Ala Leu Glu Ala  
 165 170 175  
 Ala Tyr His Gln Ala Phe Gly Lys Gly Ile Ser Leu Ser Glu Gln Gln  
 180 185 190  
 Leu Val Asp Cys Ala Gly Ala Phe Asn Asn Tyr Gly Cys Asn Gly Gly  
 195 200 205  
 Leu Pro Ser Gln Ala Phe Glu Tyr Ile Lys Ser Asn Gly Gly Leu Asp  
 210 215 220  
 Thr Glu Lys Ala Tyr Pro Tyr Thr Gly Lys Asp Glu Thr Cys Lys Phe  
 225 230 235 240  
 Ser Ala Glu Asn Val Gly Val Gln Val Leu Asn Ser Val Asn Ile Thr  
 245 250 255  
 Leu Gly Ala Glu Asp Glu Leu Lys His Ala Val Gly Leu Val Arg Pro  
 260 265 270  
 Val Ser Ile Ala Phe Glu Val Ile His Ser Phe Arg Leu Tyr Lys Ser  
 275 280 285  
 Gly Val Tyr Thr Asp Ser His Cys Gly Ser Thr Pro Met Asp Val Asn  
 290 295 300  
 His Ala Val Leu Ala Val Gly Tyr Gly Val Glu Asp Gly Val Pro Tyr  
 305 310 315 320  
 Trp Leu Ile Lys Asn Ser Trp Gly Ala Asp Trp Gly Asp Lys Gly Tyr  
 325 330 335  
 Phe Lys Met Glu Met Gly Lys Asn Met Cys Gly Ile Ala Thr Cys Ala  
 340 345 350  
 Ser Tyr Pro Val Val Ala  
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<210> 2305

<211> 1035

<212> DNA

<213> *Arabidopsis thaliana*

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gattacgtga aaggagtcgt tggtttagcc aaaggggttaa ggaaagtcaa atcggccttat      180
ccactcgtag tagcgatggt acccgacgtc ccggaggaaac accgtcgtat acttgtggat      240
caaggatgca tcgtccgtga aatcgaaccc gtttaccac ccgagaacca aactcagttc      300
gccatggcctt attacgtcat caactactct aaactccgta tctggaagtt tgtggagtat      360
agtaaaatga tataattaga tggagacatt caagtttacg aaaacatcga tcacttgttt      420
gacctaccag atggctattt gtacgcggtg atggattggt tctgtgagaa aacatggagt      480
cacagccgc aatacaagat cagatattgc caacaatgcc ccgacaaagt ccagtggcca      540
aaagcggagc ttggagagcc accggctctt tacttcaacg ccggaatggt ctgtacgag      600
cctaacctcg agacttacga ggaatcacta cgaacactta aaatcactcc tccgactcct      660
ttcgtgaac aggattttt gaacatgtac tttaagaaaa tctacaagcc gattccttta      720
gtgtacaatc tcgtccttgc gatgttatgg cgtcaccag aaaatgtaga gcttgaaaaa      780
gtcaagggtg ttactactgt tgcagcgggt tcgaagccgt ggagatacac agggaaagaa      840
gcgaacatgg agaggaaga tataaaaatg ttagtgaaaa aatggtggga catttacgac      900
gacgaatcct tggattacaa gaaacctggt accgttgttg acacagaggt cgatctcgtg      960
aatctgaagc cgttcacac cgctcttact gaagctggcc ggctcaacta cgtgaccgca      1020
ccgtccgctg cttga                                         1035

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&lt;210&gt; 2306

&lt;211&gt; 344

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2306

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Met Ala Pro Gly Leu Thr Gln Thr Ala Asp Ala Met Ser Thr Val Thr
1          5          10          15

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Ile Thr Lys Pro Ser Leu Pro Ser Val Gln Asp Ser Asp Arg Ala Tyr
          20          25          30

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Val Thr Phe Leu Ala Gly Asn Gly Asp Tyr Val Lys Gly Val Val Gly  
 35 40 45  
 Leu Ala Lys Gly Leu Arg Lys Val Lys Ser Ala Tyr Pro Leu Val Val  
 50 55 60  
 Ala Met Leu Pro Asp Val Pro Glu Glu His Arg Arg Ile Leu Val Asp  
 65 70 75 80  
 Gln Gly Cys Ile Val Arg Glu Ile Glu Pro Val Tyr Pro Pro Glu Asn  
 85 90 95  
 Gln Thr Gln Phe Ala Met Ala Tyr Tyr Val Ile Asn Tyr Ser Lys Leu  
 100 105 110  
 Arg Ile Trp Lys Phe Val Glu Tyr Ser Lys Met Ile Tyr Leu Asp Gly  
 115 120 125  
 Asp Ile Gln Val Tyr Glu Asn Ile Asp His Leu Phe Asp Leu Pro Asp  
 130 135 140  
 Gly Tyr Leu Tyr Ala Val Met Asp Cys Phe Cys Glu Lys Thr Trp Ser  
 145 150 155 160  
 His Thr Pro Gln Tyr Lys Ile Arg Tyr Cys Gln Gln Cys Pro Asp Lys  
 165 170 175  
 Val Gln Trp Pro Lys Ala Glu Leu Gly Glu Pro Pro Ala Leu Tyr Phe  
 180 185 190  
 Asn Ala Gly Met Phe Leu Tyr Glu Pro Asn Leu Glu Thr Tyr Glu Asp  
 195 200 205  
 Leu Leu Arg Thr Leu Lys Ile Thr Pro Pro Thr Pro Phe Ala Glu Gln  
 210 215 220  
 Asp Phe Leu Asn Met Tyr Phe Lys Lys Ile Tyr Lys Pro Ile Pro Leu  
 225 230 235 240  
 Val Tyr Asn Leu Val Leu Ala Met Leu Trp Arg His Pro Glu Asn Val  
 245 250 255  
 Glu Leu Gly Lys Val Lys Val Val His Tyr Cys Ala Ala Gly Ser Lys  
 260 265 270  
 Pro Trp Arg Tyr Thr Gly Lys Glu Ala Asn Met Glu Arg Glu Asp Ile  
 275 280 285

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Lys Met Leu Val Lys Lys Trp Trp Asp Ile Tyr Asp Asp Glu Ser Leu  
290 295 300

Asp Tyr Lys Lys Pro Val Thr Val Val Asp Thr Glu Val Asp Leu Val  
305 310 315 320

Asn Leu Lys Pro Phe Ile Thr Ala Leu Thr Glu Ala Gly Arg Leu Asn  
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Tyr Val Thr Ala Pro Ser Ala Ala  
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<211> 789

<212> DNA

<213> Arabidopsis thaliana

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tccgaccaat ataaccgtcc tctcttctct ctcttggtcg atctccctcc tcaccacaaa 240  
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ggtgaaggta ccgataaacc acccaccgga gtccctcatga aaccggagtt tatacgccat 480  
tattactata gccaaagccc tcttgaggac gtaactttgt catctaagct gttgcgtcct 540  
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cttttggtgg agaattggcc accttctcag ctgtatgtct tggaggatag tgaccattct 720  
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<210> 2308

<211> 262

<212> PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2308

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20 25 30Leu Asp Ala Ala Gly Phe Lys Ser Thr Ser Val Asp Leu Thr Gly Ala  
35 40 45Gly Ile Ser Leu Ile Asp Ser Asn Ile Val Phe Asp Ser Asp Gln Tyr  
50 55 60Asn Arg Pro Leu Phe Ser Leu Leu Ser Asp Leu Pro Pro His His Lys  
65 70 75 80Val Ile Leu Val Gly His Ser Ile Gly Gly Gly Ser Val Thr Glu Ala  
85 90 95Leu Cys Lys Phe Thr Asp Lys Ile Ser Met Ala Ile Tyr Leu Ala Ala  
100 105 110Ser Met Val Gln Pro Gly Ser Ile Pro Ser Pro His Leu Ser Asn Ile  
115 120 125His Val Gly Glu Glu Asp Ile Trp Glu Tyr Thr Tyr Gly Glu Gly Thr  
130 135 140Asp Lys Pro Pro Thr Gly Val Leu Met Lys Pro Glu Phe Ile Arg His  
145 150 155 160Tyr Tyr Tyr Ser Gln Ser Pro Leu Glu Asp Val Thr Leu Ser Ser Lys  
165 170 175Leu Leu Arg Pro Ala Pro Met Arg Ala Phe Gln Asp Leu Asp Lys Leu  
180 185 190Pro Pro Asn Pro Glu Ala Glu Lys Val Pro Arg Val Tyr Ile Lys Thr  
195 200 205Ala Lys Asp Asn Leu Phe Asp Ser Val Arg Gln Asp Leu Leu Val Glu  
210 215 220Asn Trp Pro Pro Ser Gln Leu Tyr Val Leu Glu Asp Ser Asp His Ser  
Page 3305

225

230

240

Ala Phe Phe Ser Val Pro Thr Thr Leu Phe Ala Tyr Leu Leu Arg Ala  
245 250 255

Val Ser Phe Leu Gln Arg  
260

&lt;210&gt; 2309

&lt;211&gt; 1020

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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ccttcgagtg ctgtttcagt ctccacgaag accagtgacg aactggagc tgtgttggtg 180  
ttcactgctc ctctgtgttt caagccaccg gagccaaaac ggctcgccgt caaatccgga 240  
aaactcttcg atgtcttggg tgcagcaatt ggattgtttt tccgattcgg cactgggtgt 300  
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gcgttgctgt taggcgggat cacggtaaag gaaactgcta aggtcgggcc tcgtcctgag 420  
aaaccattg agatatatga gtttgaaggc tgtcccttct gccggaaggc cagggaagt 480  
gttgagtggt tggatcttga tattctctac tacccttgct caagagggag tccaaatttc 540  
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gcaatgattg gtcgtatggg aaagggtaac ttgtacacac cagcgaaact accacctaa 780  
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gtattgcttg agaaagctgg tcactttcag gtgccttacc tggagatgcc aaactgga 960  
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&lt;210&gt; 2310

&lt;211&gt; 339

&lt;212&gt; PRT



<213> *Arabidopsis thaliana*

&lt;400&gt; 2310

Met Ala Gly Ile Leu Val Asn Asn Ile Leu Pro Gln Pro Pro Ile Leu  
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Arg Ser Leu Ser Ser Ser Ser Arg Arg Ser Ser Ile Arg Thr Leu Val  
 20 25 30

Met Val Lys Ala Ser Ser Ser Glu Pro Ser Glu Ser Val Ser Val Ser  
 35 40 45

Thr Lys Thr Ser Asp Asp Thr Gly Ala Val Val Val Phe Thr Ala Pro  
 50 55 60

Pro Gly Phe Lys Pro Pro Glu Pro Lys Arg Phe Ala Val Lys Ser Gly  
 65 70 75 80

Lys Leu Phe Asp Val Leu Gly Ala Ala Ile Gly Leu Phe Phe Arg Phe  
 85 90 95

Gly Thr Gly Val Phe Val Ser Gly Tyr Ser Ala Ser Phe Val Ser Lys  
 100 105 110

Glu Glu Ile Pro Ala Asp Gln Tyr Ala Leu Arg Leu Gly Gly Ile Thr  
 115 120 125

Val Lys Glu Thr Ala Lys Val Gly Pro Arg Pro Glu Lys Pro Ile Glu  
 130 135 140

Ile Tyr Glu Phe Glu Gly Cys Pro Phe Cys Arg Lys Val Arg Glu Met  
 145 150 155 160

Val Ala Val Leu Asp Leu Asp Ile Leu Tyr Pro Cys Pro Arg Gly  
 165 170 175

Ser Pro Asn Phe Arg Pro Lys Val Lys Gln Met Gly Gly Lys Gln Gln  
 180 185 190

Phe Pro Tyr Met Val Asp Pro Asn Thr Gly Val Ser Met Tyr Glu Ser  
 195 200 205

Asp Gly Ile Ile Lys Tyr Leu Ser Glu Lys Tyr Gly Asp Gly Thr Val  
 210 215 220

Pro Leu Ser Leu Ser Leu Gly Ala Leu Thr Ala Ile Thr Ala Gly Phe  
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225 230 047-E2F-PCT.ST25.txt 240  
235

Ala Met Ile Gly Arg Met Gly Lys Gly Asn Leu Tyr Thr Pro Ala Lys  
245 250 255

Leu Pro Pro Lys Pro Leu Glu Phe Trp Ala Tyr Glu Gly Ser Pro Phe  
260 265 270

Cys Lys Leu Val Arg Glu Val Leu Val Glu Leu Glu Leu Pro His Ile  
275 280 285

Gln Arg Ser Cys Ala Arg Gly Ser Pro Lys Arg Gln Val Leu Leu Glu  
290 295 300

Lys Ala Gly His Phe Gln Val Pro Tyr Leu Glu Asp Pro Asn Thr Gly  
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Val Ala Met Phe Glu Ser Ala Glu Ile Val Glu Tyr Leu Lys Gln Thr  
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Tyr Ala Ala

<210> 2311

<211> 1323

<212> DNA

<213> Arabidopsis thaliana

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	gggtccgacc	cgaaccttaa	ccggatccat	ttcgccaact	tccccaacat	cattccctcc	180
	gagctcgctc	gagccaacga	cttcacgcgc	ttcatcgacg	ccgtctctac	cagattagaa	240
	gagccgttcg	aacagctact	tgaccgttag	actctctctc	ccaccgcaac	catcgccgat	300
	acttacatac	tttgggcagt	acgtgtacta	acaaaaagga	atattccggg	ggctctcttc	360
	tgagctacgt	cagccacgaat	tctctctctc	ttctttaact	cgatctctct	cgaacgtcac	420
	ggccattttc	cgatcgcaac	atcagaatca	aaactagacg	agattgttga	ttacatcccc	480
	ggttttatct	cgacaagact	cagtgaacta	cagatctttac	acggctatag	tcatacaagtc	540
	ttcaatatat	tcaaaaagtc	tttcggtgag	ctttataaag	ctaagtatct	tctcttccct	600
	tctgcttatg	agctcgaacc	aaaagccatt	gactttttca	cttccaagtt	tgatttcccg	660

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tga 1323
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<210> 2312

<211> 440

<212> PRT

<213> Arabidopsis thaliana

<400> 2312

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Thr Glu Glu Trp Leu Gly Phe Ile Gly Ser Asp Pro Lys Pro Asn Arg  
35 40 45

Ile His Phe Ala Thr Leu Pro Asn Ile Ile Pro Ser Glu Leu Val Arg  
50 55 60

Ala Asn Asp Phe Ile Ala Phe Ile Asp Ala Val Leu Thr Arg Leu Glu  
65 70 75 80

Glu Pro Phe Glu Gln Leu Leu Asp Arg Leu Asn Ser Pro Pro Thr Ala  
85 90 95

Ile Ile Ala Asp Thr Tyr Ile Ile Trp Ala Val Arg Val Gly Thr Lys

Arg Asn Ile Pro Val Ala Ser Phe Trp Thr Thr Ser Ala Thr Ile Leu  
 115 120 125  
 Ser Leu Phe Ile Asn Ser Asp Leu Leu Ala Ser His Gly His Phe Pro  
 130 135 140  
 Ile Glu Pro Ser Glu Ser Lys Leu Asp Glu Ile Val Asp Tyr Ile Pro  
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 Gly Leu Ser Pro Thr Arg Leu Ser Asp Leu Gln Ile Leu His Gly Tyr  
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 Ser His Gln Val Phe Asn Ile Phe Lys Lys Ser Phe Gly Glu Leu Tyr  
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 Ala Ile Asp Phe Phe Thr Ser Lys Phe Asp Phe Pro Val Tyr Ser Thr  
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 Gly Pro Leu Ile Pro Leu Glu Glu Leu Ser Val Gly Asn Glu Asn Arg  
 225 230 235 240  
 Glu Leu Asp Tyr Phe Lys Trp Leu Asp Glu Gln Pro Glu Ser Ser Val  
 245 250 255  
 Leu Tyr Ile Ser Gln Gly Ser Phe Leu Ser Val Ser Glu Ala Gln Met  
 260 265 270  
 Glu Glu Ile Val Val Gly Val Arg Glu Ala Gly Val Lys Phe Phe Trp  
 275 280 285  
 Val Ala Arg Gly Gly Glu Leu Lys Leu Lys Glu Ala Leu Glu Gly Ser  
 290 295 300  
 Leu Gly Val Val Val Ser Trp Cys Asp Gln Leu Arg Val Leu Cys His  
 305 310 315 320  
 Ala Ala Ile Gly Gly Phe Trp Thr His Cys Gly Tyr Asn Ser Thr Leu  
 325 330 335  
 Glu Gly Ile Cys Ser Gly Val Pro Leu Leu Thr Phe Pro Val Phe Trp  
 340 345 350

Asp Gln Phe Leu Asn Ala Lys Met Ile Val Glu Glu Trp Arg Val Gly  
 355 360 365

Met Gly Ile Glu Arg Lys Lys Gln Met Glu Leu Leu Ile Val Ser Asp  
 370 375 380

Glu Ile Lys Glu Leu Val Lys Arg Phe Met Asp Gly Glu Ser Glu Glu  
 385 390 395 400

Gly Lys Glu Met Arg Arg Arg Thr Cys Asp Leu Ser Glu Ile Cys Arg  
 405 410 415

Gly Ala Val Ala Lys Gly Gly Ser Ser Asp Ala Asn Ile Asp Ala Phe  
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Ile Lys Asp Ile Thr Lys Ile Val  
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<211> 1095

<212> DNA

<213> Arabidopsis thaliana

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 aatgttaagc atcaccgaat gtttcgtgga ccgaagcgcg gatctgggtg tttcatgtat 360  
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<211> 364

<212> PRT

<213> Arabidopsis thaliana

<400> 2314

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Asn Val Trp Lys Leu Tyr Glu Arg Trp Arg Gly His His Ser Val Ser  
 35 40 45

Arg Ala Ser His Glu Ala Ile Lys Arg Phe Asn Val Phe Arg His Asn  
 50 55 60

Val Leu His Val His Arg Thr Asn Lys Lys Asn Lys Pro Tyr Lys Leu  
 65 70 75 80

Lys Ile Asn Arg Phe Ala Asp Ile Thr His His Glu Phe Arg Ser Ser  
 85 90 95

Tyr Ala Gly Ser Asn Val Lys His His Arg Met Leu Arg Gly Pro Lys  
 100 105 110

Arg Gly Ser Gly Gly Phe Met Tyr Glu Asn Val Thr Arg Val Pro Ser  
 115 120 125

Ser Val Asp Trp Arg Glu Lys Gly Ala Val Thr Glu Val Lys Asn Gln  
 130 135 140

Gln Asp Cys Gly Ser Cys Trp Ala Phe Ser Thr Val Ala Ala Val Gln  
 145 150 155 160

Gly Ile Asn Lys Ile Arg Thr Asn Lys Leu Val Ser Leu Ser Glu Gln  
 165 170 175

Glu Leu Val Asp Cys Asp Thr Glu Glu Asn Gln Gly Cys Ala Gly Gly  
 180 185 190

Leu Met Glu Pro Ala Phe Glu Phe Ile Lys Asn Asn Gly Gly Ile Lys  
 195 200 205

Thr Glu Glu Thr Tyr Pro Tyr Asp Ser Ser Asp Val Gln Phe Cys Arg  
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Ala Asn Ser Ile Gly Gly Glu Thr Val Thr Ile Asp Gly His Glu His  
 225 230 235 240

Val Pro Glu Asn Asp Glu Glu Glu Leu Leu Lys Ala Val Ala His Gln  
 245 250 255

Pro Val Ser Val Ala Ile Asp Ala Gly Ser Ser Asp Phe Gln Leu Tyr  
 260 265 270

Ser Glu Gly Val Phe Ile Gly Glu Cys Gly Thr Gln Leu Asn His Gly  
 275 280 285

Val Val Ile Val Gly Tyr Gly Glu Thr Lys Asn Gly Thr Lys Tyr Trp  
 290 295 300

Ile Val Arg Asn Ser Trp Gly Pro Glu Trp Gly Glu Gly Gly Tyr Val  
 305 310 315 320

Arg Ile Glu Arg Gly Ile Ser Glu Asn Glu Gly Arg Cys Gly Ile Ala  
 325 330 335

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<211> 2088

<212> DNA

<213> Arabidopsis thaliana

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<210> 2316

<211> 695

<212> PRT

<213> Arabidopsis thaliana

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35 40 45

Arg Ile Glu Met Arg Gln Ser Glu Leu Pro Ser Lys Val Gly Ile Asn  
50 55 60

Gly Arg Ser Val Lys Met Val Pro Ala Ser Glu Val Val Lys Arg Lys  
65 70 75 80

Asp Gly Val Asn Gly Ser Ala Gly Lys Gly Val Asn Gly Ala Ser Leu  
85 90 95

Val Ser Ser Arg Asn Ile Asn Gly Ala Ala Ser Thr Leu Val Lys Ala  
100 105 110

Pro Lys Lys Thr Thr Glu Ser Tyr Leu Pro Pro Pro Val Glu Gly Val  
115 120 125

Arg Val Leu Pro Ser Asp Glu Gly Phe Ser Trp Ala Asp Glu Asn Tyr  
130 135 140

Ser Ser Leu Gln Arg Ser Ile Asp Val Trp Ser Phe Val Ile Ser Leu  
145 150 155 160

Arg Ile Arg Ile Leu Phe Asp Asn Ser Lys Trp Ala Tyr Val Gly Gly  
165 170 175

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Phe Thr Glu Glu Lys Gln Lys Ser Arg Arg Arg Glu Thr Ala Ser Trp  
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 Gln Leu Ser Ser Thr Arg Ser Asp Leu Phe Pro Arg Glu Phe Val Asp  
 210 215 220  
 Glu Leu Ser Lys Leu Gln Asp Arg Val Pro Ala Phe Ser Pro Glu Lys  
 225 230 235 240  
 Ala Lys Arg Phe Ile Glu Ala Glu Leu Gly Ala Pro Ile Ser Val Met  
 245 250 255  
 Tyr Lys Glu Phe Glu Glu Gln Pro Ile Ala Ala Ala Ser Leu Gly Gln  
 260 265 270  
 Val His Arg Ala Val Leu His Asn Gly Glu Lys Val Val Lys Val  
 275 280 285  
 Gln Arg Pro Gly Leu Lys Lys Leu Phe Asp Ile Asp Leu Arg Asn Leu  
 290 295 300  
 Lys Leu Ile Ala Glu Tyr Phe Gln Lys Ser Glu Ser Phe Gly Thr Asn  
 305 310 315 320  
 Asp Trp Val Gly Ile Tyr Glu Glu Cys Ala Leu Ile Leu Tyr Gln Glu  
 325 330 335  
 Ile Asp Tyr Ile Asn Glu Ala Lys Asn Ala Asp Arg Phe Arg Arg Asp  
 340 345 350  
 Phe Arg Asn Ile Asn Trp Val Arg Val Pro Leu Val Tyr Trp Asp Tyr  
 355 360 365  
 Ser Ala Met Lys Val Leu Thr Leu Glu Tyr Val Pro Gly Val Lys Ile  
 370 375 380  
 Asn Asn Leu Asp Ala Leu Ala Ala Arg Gly Phe Asn Arg Ser Arg Ile  
 385 390 395 400  
 Ala Ser Arg Ala Ile Glu Ala Tyr Leu Ile Gln Ile Leu Lys Thr Gly  
 405 410 415  
 Phe Phe His Ala Asp Pro His Pro Gly Asn Leu Ala Ile Asp Val Asp  
 420 425 430

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Glu Ser Ile Ile Tyr Tyr Asp Phe Gly Met Met Gly Glu Ile Lys Thr  
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 Phe Thr Arg Lys Arg Leu Leu Asp Leu Phe Tyr Ser Val Tyr Glu Lys  
 450 455 460  
 Asp Ala Lys Lys Val Met Gln Asn Leu Ile Asp Leu Glu Ala Leu Gln  
 465 470 475 480  
 Pro Thr Gly Asp Leu Ser Ser Val Arg Arg Ser Val Gln Phe Phe Leu  
 485 490 495  
 Asp Asn Leu Leu Ser Gln Ser Pro Asp Gln Gln Gln Thr Leu Ala Ala  
 500 505 510  
 Ile Gly Glu Asp Leu Phe Ala Ile Ser Gln Asp Gln Pro Phe Arg Phe  
 515 520 525  
 Pro Ser Thr Phe Thr Phe Val Ile Arg Ala Phe Ser Thr Leu Glu Gly  
 530 535 540  
 Ile Gly Tyr Ile Leu Asp Pro Glu Phe Ser Phe Val Lys Val Ala Ala  
 545 550 555 560  
 Pro Tyr Ala Gln Glu Leu Leu Asp Leu Lys Gln Arg Gln Arg Ser Gly  
 565 570 575  
 Thr Gln Leu Val Gln Glu Ile Arg Lys Gln Ala Asp Asp Ala Arg Ser  
 580 585 590  
 Ser Thr Leu Ser Met Pro Tyr Arg Val Gln Arg Ile Glu Glu Phe Val  
 595 600 605  
 Lys Glu Leu Asp Ser Gly Asp Leu Lys Leu Arg Val Arg Val Leu Glu  
 610 615 620  
 Ser Glu Arg Ala Ala Arg Lys Ala Thr Ile Leu Gln Met Ala Thr Met  
 625 630 635 640  
 Tyr Thr Val Leu Gly Gly Thr Leu Leu Asn Ile Gly Val Thr Phe Ser  
 645 650 655  
 Asn Gln Gly Ser Gln Leu Val Ala Asn Gly Ser Phe Ile Gly Ala Gly  
 660 665 670  
 Ile Phe Met Leu Leu Val Leu Arg Ser Met Gln Arg Val Asn Lys Leu  
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675

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690 695

&lt;210&gt; 2317

&lt;211&gt; 651

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2317

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&lt;211&gt; 216

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2318

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Val Pro Thr Lys Ser Ser Glu Ser Asn Phe Phe Gly Ser Thr Leu Thr	
35 40 45	

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His Ser Ser Tyr Ile Ser Pro Val Ser Ser Ser Ser Leu Lys Gly Leu  
50 55 60

Ile Phe Ala Lys Val Asn Lys Gly Gln Ala Ala Pro Asp Phe Thr Leu  
65 70 75 80

Lys Asp Gln Asn Gly Lys Pro Val Ser Leu Lys Lys Tyr Lys Gly Lys  
85 90 95

Pro Val Val Leu Tyr Phe Tyr Pro Ala Asp Glu Thr Pro Gly Cys Thr  
100 105 110

Lys Gln Ala Cys Ala Phe Arg Asp Ser Tyr Glu Lys Phe Lys Lys Ala  
115 120 125

Gly Ala Glu Val Ile Gly Ile Ser Gly Asp Asp Ser Ala Ser His Lys  
130 135 140

Ala Phe Ala Ser Lys Tyr Lys Leu Pro Tyr Thr Leu Leu Ser Asp Glu  
145 150 155 160

Gly Asn Lys Val Arg Lys Asp Trp Gly Val Pro Gly Asp Leu Phe Gly  
165 170 175

Ala Leu Pro Gly Arg Gln Thr Tyr Val Leu Asp Lys Asn Gly Val Val  
180 185 190

Gln Leu Ile Tyr Asn Asn Gln Phe Gln Pro Glu Lys His Ile Asp Glu  
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Thr Leu Lys Phe Leu Lys Ala Ala  
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<211> 933

<212> DNA

<213> Arabidopsis thaliana

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<211> 310

<212> PRF

<213> *Arabidopsis thaliana*

<400> 2320

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20 25 30

Thr Thr Thr Val Ala Gly Cys Asn Gly Ile Ser Ala Cys Asp Leu Glu  
35 40 45

Lys Leu Asn Val Leu Gly Cys Gly Asn Gly Gly Ile Val Tyr Lys Val  
50 55 60

Arg His Lys Thr Thr Ser Glu Ile Tyr Ala Leu Lys Thr Val Asn Gly  
65 70 75 80

Asp Met Asp Pro Ile Phe Thr Arg Gln Leu Met Arg Glu Met Glu Ile  
85 90 95

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Leu Arg Arg Thr Asp Ser Pro Tyr Val Val Lys Cys His Gly Ile Phe  
100 105 110

Glu Lys Pro Val Val Gly Glu Val Ser Ile Leu Met Glu Tyr Met Asp  
115 120 125

Gly Gly Thr Leu Glu Ser Leu Arg Gly Gly Val Thr Glu Gln Lys Leu  
130 135 140

Ala Gly Phe Ala Lys Gln Ile Leu Lys Gly Leu Ser Tyr Leu His Ala  
145 150 155 160

Leu Lys Ile Val His Arg Asp Ile Lys Pro Ala Asn Leu Leu Leu Asn  
165 170 175

Ser Lys Asn Glu Val Lys Ile Ala Asp Phe Gly Val Ser Lys Ile Leu  
180 185 190

Val Arg Ser Leu Asp Ser Cys Asn Ser Tyr Val Gly Thr Cys Ala Tyr  
195 200 205

Met Ser Pro Glu Arg Phe Asp Ser Glu Ser Ser Gly Gly Ser Ser Asp  
210 215 220

Ile Tyr Ala Gly Asp Ile Trp Ser Phe Gly Leu Met Met Leu Glu Leu  
225 230 235 240

Leu Val Gly His Phe Pro Leu Leu Pro Pro Gly Gln Arg Pro Asp Trp  
245 250 255

Ala Thr Leu Met Cys Ala Val Cys Phe Gly Glu Pro Pro Arg Ala Pro  
260 265 270

Glu Gly Cys Ser Glu Glu Phe Arg Ser Phe Val Glu Cys Cys Leu Arg  
275 280 285

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<212> DNA

<213> Arabidopsis thaliana

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<210> 2322

<211> 514

<212> PRT



<213> *Arabidopsis thaliana*

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 20 25 30

Leu Cys Ser Gln Ile Ser Asn Ile Ser Asn Lys Leu Ser Asp Thr Thr  
 35 40 45

Tyr Ala Val Asp Asn Thr Tyr Leu Leu Phe Ser Ala Tyr Leu Val Phe  
 50 55 60

Ala Met Gln Leu Gly Phe Ala Met Leu Cys Ala Gly Ser Val Arg Ala  
 65 70 75 80

Lys Asn Thr Met Asn Ile Met Leu Thr Asn Val Leu Asp Ala Ala Ala  
 85 90 95

Gly Ala Ile Ser Tyr Tyr Leu Phe Gly Phe Ala Phe Ala Phe Gly Thr  
 100 105 110

Pro Ser Asn Gly Phe Ile Gly Arg His His Ser Phe Phe Ala Leu Ser  
 115 120 125

Ser Tyr Pro Glu Arg Pro Gly Ser Asp Phe Ser Phe Phe Leu Tyr Gln  
 130 135 140

Trp Ala Phe Ala Ile Ala Ala Ala Gly Ile Thr Ser Gly Ser Ile Ala  
 145 150 155 160

Glu Arg Thr Gln Phe Val Ala Tyr Leu Ile Tyr Ser Thr Phe Leu Thr  
 165 170 175

Gly Phe Val Tyr Pro Thr Val Ser His Trp Phe Trp Ser Ser Asp Gly  
 180 185 190

Trp Ala Ser Ala Ser Arg Ser Asp Asn Asn Leu Leu Phe Gly Ser Gly  
 195 200 205

Ala Ile Asp Phe Ala Gly Ser Gly Val Val His Met Val Gly Gly Ile  
 210 215 220

Ala Gly Leu Cys Gly Ala Leu Val Glu Gly Pro Arg Ile Gly Arg Phe  
 Page 3323

225                      230                      240

Asp Arg Ser Gly Arg Ser Val Ala Leu Arg Gly His Ser Ala Ser Leu  
                                 245                      250                      255

Val Val Leu Gly Thr Phe Leu Leu Trp Phe Gly Trp Tyr Gly Phe Asn  
                                 260                      265                      270

Pro Gly Ser Phe Leu Thr Ile Leu Lys Gly Tyr Asp Lys Ser Arg Pro  
                                 275                      280                      285

Tyr Tyr Gly Gln Trp Ser Ala Val Gly Arg Thr Ala Val Thr Thr Thr  
                                 290                      295                      300

Leu Ser Gly Cys Thr Ala Ala Leu Thr Thr Leu Phe Ser Lys Arg Leu  
305                                   310                      315                      320

Leu Ala Gly His Trp Asn Val Ile Asp Val Cys Asn Gly Leu Leu Gly  
                                 325                      330                      335

Gly Phe Ala Ala Ile Thr Ser Gly Cys Ala Val Val Glu Pro Trp Ala  
                                 340                      345                      350

Ala Ile Val Cys Gly Phe Val Ala Ser Trp Val Leu Ile Gly Phe Asn  
                                 355                      360                      365

Leu Leu Ala Lys Lys Leu Lys Tyr Asp Asp Pro Leu Glu Ala Ala Gln  
                                 370                      375                      380

Leu His Gly Gly Cys Gly Ala Trp Gly Leu Ile Phe Thr Gly Leu Phe  
385                                   390                      395                      400

Ala Arg Lys Glu Tyr Val Asn Glu Ile Tyr Ser Gly Asp Arg Pro Tyr  
                                 405                      410                      415

Gly Leu Phe Met Gly Gly Gly Gly Lys Leu Leu Ala Ala Gln Ile Val  
                                 420                      425                      430

Gln Ile Ile Val Ile Val Gly Trp Val Thr Val Thr Met Gly Pro Leu  
                                 435                      440                      445

Phe Tyr Gly Leu His Lys Met Asn Leu Leu Arg Ile Ser Ala Glu Asp  
                                 450                      455                      460

Glu Met Ala Gly Met Asp Met Thr Arg His Gly Gly Phe Ala Tyr Ala  
465                                   470                      475                      480

Tyr Asn Asp Glu Asp Asp Val Ser Thr Lys Pro Trp Gly His Phe Ala  
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Gly Arg Val Glu Pro Thr Ser Arg Ser Ser Thr Pro Thr Pro Thr Leu  
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Thr Val

<210> 2323

<211> 1362

<212> DNA

<213> *Arabidopsis thaliana*

<400> 2323

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catcccgaga acatcaagggt ccacgacgtc tctgacggtg ttccggaggg aaccatgctc    240
gggaatccac tggagatggt cgagctgttt ctggaagcgg ctccacgtat ttccggagc    300
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gctttatacc aaatgagtct tgctttacct cgtgcctctg ctgttttcat cagttccttt    660
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gatcggacaa gagagcaagg gatagtgggt ccttgggctc cacaagtgga actgctgaaa   1020
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aatgccaaga agcttaaaga aaaactccaa gaagatttct ccatgaaagg aagctcttta 1320  
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<210> 2324

<211> 453

<212> PRT

<213> Arabidopsis thaliana

<400> 2324

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35 40 45  
Thr Ala Arg Ser Asn Ala Ser Leu Phe Ser Ser Asp His Pro Glu Asn  
50 55 60  
Ile Lys Val His Asp Val Ser Asp Gly Val Pro Glu Gly Thr Met Leu  
65 70 75 80  
Gly Asn Pro Leu Glu Met Val Glu Leu Phe Leu Glu Ala Ala Pro Arg  
85 90 95  
Ile Phe Arg Ser Glu Ile Ala Ala Ala Glu Ile Glu Val Gly Lys Lys  
100 105 110  
Val Thr Cys Met Leu Thr Asp Ala Phe Phe Trp Phe Ala Ala Asp Ile  
115 120 125  
Ala Ala Glu Leu Asn Ala Thr Trp Val Ala Phe Trp Ala Gly Gly Ala  
130 135 140  
Asn Ser Leu Cys Ala His Leu Tyr Thr Asp Leu Ile Arg Glu Thr Ile  
145 150 155 160  
Gly Leu Lys Asp Val Ser Met Glu Glu Thr Leu Gly Phe Ile Pro Gly  
165 170 175

Met Glu Asn Tyr Arg Val Lys Asp Ile Pro Glu Glu Val Val Phe Glu  
 180 185 190  
 Asp Leu Asp Ser Val Phe Pro Lys Ala Leu Tyr Gln Met Ser Leu Ala  
 195 200 205  
 Leu Pro Arg Ala Ser Ala Val Phe Ile Ser Ser Phe Glu Glu Leu Glu  
 210 215 220  
 Pro Thr Leu Asn Tyr Asn Leu Arg Ser Lys Leu Lys Arg Phe Leu Asn  
 225 230 235 240  
 Ile Ala Pro Leu Thr Leu Leu Ser Ser Thr Ser Glu Lys Glu Met Arg  
 245 250 255  
 Asp Pro His Gly Cys Phe Ala Trp Met Gly Lys Arg Ser Ala Ala Ser  
 260 265 270  
 Val Ala Tyr Ile Ser Phe Gly Thr Val Met Glu Pro Pro Glu Glu  
 275 280 285  
 Leu Val Ala Ile Ala Gln Gly Leu Glu Ser Ser Lys Val Pro Phe Val  
 290 295 300  
 Trp Ser Leu Lys Glu Lys Asn Met Val His Leu Pro Lys Gly Phe Leu  
 305 310 315 320  
 Asp Arg Thr Arg Glu Gln Gly Ile Val Val Pro Trp Ala Pro Gln Val  
 325 330 335  
 Glu Leu Leu Lys His Glu Ala Met Gly Val Asn Val Thr His Cys Gly  
 340 345 350  
 Trp Asn Ser Val Leu Glu Ser Val Ser Ala Gly Val Pro Met Ile Gly  
 355 360 365  
 Arg Pro Ile Leu Ala Asp Asn Arg Leu Asn Gly Arg Ala Val Glu Val  
 370 375 380  
 Val Trp Lys Val Gly Val Met Met Asp Asn Gly Val Phe Thr Lys Glu  
 385 390 395 400  
 Gly Phe Glu Lys Cys Leu Asn Asp Val Phe Val His Asp Asp Gly Lys  
 405 410 415  
 Thr Met Lys Ala Asn Ala Lys Lys Leu Lys Glu Lys Leu Gln Glu Asp  
 420 425 430

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Phe Ser Met Lys Gly Ser Ser Leu Glu Asn Phe Lys Ile Leu Leu Asp  
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Glu Ile Val Lys Val  
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<210> 2325

<211> 1002

<212> DNA

<213> Arabidopsis thaliana

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aatgattcga tgcttttgct taaagggttt gattctgttt ctcatactct gtctctcctt      300
tctagtaatc tcgacaatgc cttcaggga gttagagaat tagctaaacc accttcatat      360
tctgagatac tccattcgaa tctcaaagct gatcagattc aacgacaaca gaaagaagaa      420
gatgaagagg aagaagagag taaagggaag aagaggaaac acgaatctga tgttgaacaa      480
acagaagatt cgtctaatag agaagagaag agaccaaaag agaggaaaat catgaagaag      540
gctaagaaca ttgctatata catggcagct aaggcgaatt cgcttgcaag agagcttaaa      600
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cctcaatacg atgatgaaga agaagagcat gaaacaagag ctcgagatgt ctcgaaagcc      960
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<210> 2326

<211> 333

<212> PRT

<213> Arabidopsis thaliana

&lt;400&gt; 2326

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20     25
Pro Ser Val Ser Pro Ser Ser Asp Lys Arg Leu Trp Ser Asn Val Arg
35     40     45
Asn Arg Val Asp Val Leu Leu Glu Glu Asn Ser Lys Asn His Lys Pro
50     55     60
Val Thr Asn Thr Ile Ala Ile Glu Ser Glu Arg Ser Lys Arg Phe Lys
65     70     75     80
Asn Asp Ser Met Leu Leu Leu Lys Gly Phe Asp Ser Val Ser His Thr
85     90     95
Leu Ser Leu Leu Ser Ser Asn Leu Asp Asn Ala Leu Gln Gly Val Arg
100    105    110
Glu Leu Ala Lys Pro Pro Ser Tyr Ser Glu Ile Leu His Ser Asn Leu
115    120    125
Lys Ala Asp Gln Ile Gln Arg Gln Gln Lys Glu Glu Asp Glu Glu Glu
130    135    140
Glu Glu Ser Lys Gly Lys Lys Arg Lys His Glu Ser Asp Val Glu Gln
145    150    155    160
Thr Glu Asp Ser Ser Asn Glu Glu Glu Lys Arg Pro Lys Glu Arg Lys
165    170    175
Ile Met Lys Lys Ala Lys Asn Ile Ala Ile Ser Met Ala Ala Lys Ala
180    185    190
Asn Ser Leu Ala Arg Glu Leu Lys Thr Ile Lys Ser Asp Leu Ser Phe
195    200    205
Ile Gln Glu Arg Cys Gly Leu Leu Glu Glu Glu Asn Lys Arg Leu Arg
210    215    220
Asp Gly Phe Val Lys Gly Val Arg Pro Glu Glu Asp Asp Leu Val Arg
225    230    235    240

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047-E2F-PCT.ST25.txt

Leu Gln Leu Glu Val Leu Leu Ala Glu Lys Ala Arg Leu Ala Asn Glu  
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Asn Ala Asn Leu Val Arg Glu Asn Gln Cys Leu His Gln Met Val Glu  
260 265 270  
Tyr His Gln Ile Thr Ser Gln Asp Leu Ser Pro Ser Tyr Glu Gln Val  
275 280 285  
Val Gln Gly Phe Cys Leu Asp Phe Ser Ser Pro Leu Pro Gln Tyr Asp  
290 295 300  
Asp Glu Glu Glu Glu His Glu Thr Arg Ala Arg Asp Val Ser Lys Ala  
305 310 315 320  
Leu Asn Glu Ser Phe Glu Lys Ala Glu Glu Gln Tyr  
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<210> 2327

<211> 843

<212> DNA

<213> Arabidopsis thaliana

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gccaaagctg gttgccagggt tattgcagca gctcgtctgt ttgatcgact caactctctc 180  
tgctctgaaa tcaacagctt cagttcaact ggaatccaag ccgagctctt tgagttagac 240  
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aagatcgatg cattgatcaa caatgctgga atcagaggca atgtcaagtc gagtttggat 360  
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tccaaacatg tttgtatggt aatgcgtgac gctaaacgag gtggctcggg gataaacatc 480  
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ccagggtcta cttctctggt tcgctatctc attcatgact cttctcaata tatatccggg 780  
aatacatata ttgttgattc cggtgctaca ttgcccggtg tgccctatctt ttcattcttc 840  
Page 3330



tga

843

&lt;210&gt; 2328

&lt;211&gt; 280

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2328

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20 25 30Gly Arg Glu Ile Cys Leu Asp Leu Ala Lys Ala Gly Cys Gln Val Ile  
35 40 45Ala Ala Ala Arg Arg Val Asp Arg Leu Asn Ser Leu Cys Ser Glu Ile  
50 55 60Asn Ser Phe Ser Ser Thr Gly Ile Gln Ala Ala Ala Leu Glu Leu Asp  
65 70 75 80Val Ser Ser Asp Ala Ala Thr Ile Gln Lys Ala Val Arg Glu Ala Trp  
85 90 95Asp Ile Phe Gly Lys Ile Asp Ala Leu Ile Asn Asn Ala Gly Ile Arg  
100 105 110Gly Asn Val Lys Ser Ser Leu Asp Leu Ser Glu Asp Glu Trp Asp Asn  
115 120 125Val Phe Lys Thr Asn Leu Lys Gly Pro Trp Leu Val Ser Lys His Val  
130 135 140Cys Met Leu Met Arg Asp Ala Lys Arg Gly Gly Ser Val Ile Asn Ile  
145 150 155 160Ser Ser Ile Ala Gly Ile Arg Gly Met Leu Pro Gly Gly Leu Ala Tyr  
165 170 175Ala Cys Ser Lys Gly Gly Val Asp Thr Met Ser Arg Met Met Ala Leu  
180 185 190

047-E2F-PCT.ST25.txt

Glu Leu Gly Val His Lys Ile Arg Val Asn Ser Ile Ala Pro Gly Leu  
195 200 205

Phe Lys Ser Glu Ile Thr Gln Gly Leu Met Gln Lys Glu Trp Leu Lys  
210 215 220

Asn Val Thr Glu Arg Thr Val Pro Leu Lys Val Gln Gln Thr Val Asp  
225 230 235 240

Pro Gly Leu Thr Ser Leu Val Arg Tyr Leu Ile His Asp Ser Ser Gln  
245 250 255

Tyr Ile Ser Gly Asn Thr Tyr Ile Val Asp Ser Gly Ala Thr Leu Pro  
260 265 270

Gly Val Pro Ile Phe Ser Ser Leu  
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<211> 627

<212> DNA

<213> Arabidopsis thaliana

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<210> 2330

<211> 208

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2330

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Leu Phe Asn Ala Ile Gly Tyr Val Met Asp Lys Asp Lys Asn Lys Ala  
 20 25 30

Pro Glu Leu Arg Gln Val Ile Ala Ala Ala Val Ala Ser Asn Lys Glu  
 35 40 45

Lys Tyr Asn Glu Ala Phe Leu Gly Lys Leu Asn Glu Glu Tyr Cys Ala  
 50 55 60

Trp Ile Leu Asn Pro Asp Lys Trp Gly Gly Ala Ile Glu Leu Ser Ile  
 65 70 75 80

Leu Ala Asp Tyr Tyr Gly Arg Glu Ile Ala Ala Tyr Asp Ile Gln Thr  
 85 90 95

Ser Arg Cys Asp Leu Tyr Gly Gln Thr Arg Asn Tyr Asp Glu Arg Val  
 100 105 110

Met Leu Ile Tyr Asp Gly Leu His Tyr Asp Ala Leu Ala Leu Ser Pro  
 115 120 125

Phe Glu Gly Ala Glu Glu Asp Phe Asp Met Thr Ile Tyr Pro Val Gly  
 130 135 140

Lys Asp Arg Ser Ile Gly Ser Ile Glu Gly Leu Ala Leu Asn Leu Val  
 145 150 155 160

Lys Asp Gln Gln Arg Lys Arg Ser Tyr Thr Asp Thr Ala Asn Phe Thr  
 165 170 175

Leu Arg Cys Gly Val Cys Gln Ile Gly Val Ile Gly Gln Lys Glu Ala  
 180 185 190

Val Glu His Ala Gln Ala Thr Gly His Val Asn Phe Gln Glu Tyr Lys  
 195 200 205

&lt;210&gt; 2331

&lt;211&gt; 903

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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&lt;210&gt; 2332

&lt;211&gt; 300

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2332

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Ala Gln Leu Val Val Gly His Pro Phe Asp Thr Ile Lys Val Lys Leu
20           25           30

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Gln Ser Gln Pro Thr Pro Ala Pro Gly Gln Leu Pro Arg Tyr Thr Gly
35           40           45

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Ala Ile Asp Ala Val Lys Gln Thr Val Ala Ser Glu Gly Thr Lys Gly  
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Leu Tyr Lys Gly Met Gly Ala Pro Leu Ala Thr Val Ala Ala Phe Asn  
65 70 75 80

Ala Val Leu Phe Thr Val Arg Gly Gln Met Glu Gly Leu Leu Arg Ser  
85 90 95

Glu Ala Gly Val Pro Leu Thr Ile Ser Gln Gln Phe Val Ala Gly Ala  
100 105 110

Gly Ala Gly Phe Ala Val Ser Phe Leu Ala Cys Pro Thr Glu Leu Ile  
115 120 125

Lys Cys Arg Leu Gln Ala Gln Gly Ala Leu Ala Gly Ala Ser Thr Thr  
130 135 140

Ser Ser Val Val Ala Ala Val Lys Tyr Gly Gly Pro Met Asp Val Ala  
145 150 155 160

Arg His Val Leu Arg Ser Glu Gly Gly Ala Arg Gly Leu Phe Lys Gly  
165 170 175

Leu Phe Pro Thr Phe Ala Arg Glu Val Pro Gly Asn Ala Thr Met Phe  
180 185 190

Ala Ala Tyr Glu Ala Phe Lys Arg Phe Leu Ala Gly Gly Ser Asp Thr  
195 200 205

Ser Ser Leu Gly Gln Gly Ser Leu Ile Met Ala Gly Gly Val Ala Gly  
210 215 220

Ala Ser Phe Trp Gly Ile Val Tyr Pro Thr Asp Val Val Lys Ser Val  
225 230 235 240

Leu Gln Val Asp Asp Tyr Lys Asn Pro Arg Tyr Thr Gly Ser Met Asp  
245 250 255

Ala Phe Arg Lys Ile Leu Lys Ser Glu Gly Val Lys Gly Leu Tyr Lys  
260 265 270

Gly Phe Gly Pro Ala Met Ala Arg Ser Val Pro Ala Asn Ala Ala Cys  
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Phe Leu Ala Tyr Glu Met Thr Arg Ser Ser Leu Gly

290

295

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 caagttagct ggaatcatgt tgaggaaatca ggtttgagct ggtttgatgc agaaccttcg 780  
 gaccaaaagt gctttgcgga tttcatgcct ctggggaaac taaatgaacc ttatttggtgta 840  
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 <212> PRT  
 <213> *Arabidopsis thaliana*

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Arg His Thr Thr Ser His Leu Phe Lys Ile Asp Asn Phe Ser Leu Leu  
 20 25 30

047-E2F-PCT.ST25.txt

Lys Lys His Gly Ile Glu Lys Val Glu Ser Ser Val Phe Asp Leu Ala  
 35 40 45  
 Gly His Lys Trp Lys Leu Ser Val Tyr Pro Asn Gly His Lys Asn Ala  
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 65 70 75 80  
 Asp Met Pro Thr Tyr Glu Leu Leu Val Val Ser Gln Leu Glu Arg Lys  
 85 90 95  
 Trp His Thr His Gly Arg Asp Glu Phe Asp Ile Asn Pro Glu Pro Ala  
 100 105 110  
 Ser Glu Gly Phe Leu Arg Phe Ile Ser Leu Ala Asp Leu Glu Arg Lys  
 115 120 125  
 Gly Phe Leu Ile Gly Asp Cys Cys Met Phe Gly Val Lys Phe His Gly  
 130 135 140  
 Ile Glu Pro Ala Asn Pro Gly Thr Ala Glu Cys Phe Ser Leu Ile Glu  
 145 150 155 160  
 Lys Pro Leu Asn His Lys Val Thr Trp Met Met Ser Lys Phe Ser Ser  
 165 170 175  
 Phe Asn Pro Gly Lys Ala His Gln Ser Asn Glu Phe Val Val Gly Thr  
 180 185 190  
 Arg Lys Trp Arg Leu Glu Val His Pro Arg Gly Tyr Met Asp Glu Lys  
 195 200 205  
 Asp Lys Ser Phe Ser Val Tyr Leu Ser Ala Glu Gly Phe Val Asn Asn  
 210 215 220  
 Ala Pro Met Thr Lys Thr Tyr Ala Lys Phe Lys Leu Arg Val Leu Asp  
 225 230 235 240  
 Gln Val Ser Trp Asn His Val Glu Glu Ser Gly Leu Ser Trp Phe Asp  
 245 250 255  
 Ala Glu Pro Ser Asp Gln Ser Gly Phe Ala Asp Phe Met Pro Leu Gly  
 260 265 270  
 Lys Leu Asn Glu Pro Tyr Leu Val Lys Asp Lys Leu Tyr Val Gly Val  
 Page 3337

275 047-E2F-PCT.ST25.txt  
280 285

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<211> 333

<212> DNA

<213> Arabidopsis thaliana

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<210> 2336

<211> 110

<212> PRT

<213> Arabidopsis thaliana

<400> 2336

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Lys Val Ser Ala Gly Lys Ile Gly Asn Phe Ser Leu Gly Ser Ile Phe  
35 40 45  
Lys Ser Cys Glu Thr Cys Gly Ala Lys Gly Ala Ile Glu Cys Pro Gly  
50 55 60  
Cys Lys Gly Thr Gly Lys Asn Lys Lys Asn Gly Asn Met Phe Glu Arg  
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Trp Lys Cys Phe Asp Cys Gln Gly Phe Gly Met Lys Ser Cys Pro Lys  
 85 90 95

Cys Gly Lys Gly Gly Leu Thr Pro Glu Gln Arg Gly Glu Arg  
 100 105 110

<210> 2337

<211> 1479

<212> DNA

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<210> 2338

<211> 492

<212> PRT

<213> Arabidopsis thaliana

<400> 2338

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 35 40 45  
 Lys Pro Pro Leu His Arg Thr Phe Leu Ser Leu Ser Lys Ser Ile Gly  
 50 55 60  
 Asn Ala Pro Val Phe His Leu Arg Leu Gly Asn Arg Leu Val Tyr Val  
 65 70 75 80  
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 85 90 95  
 Val Leu Ala Asn Arg Pro Lys Phe Thr Ile Ser Lys His Leu Gly Tyr  
 100 105 110  
 Asn Ala Thr Tyr Leu Leu Ser Ala Ser Tyr Gly Asp His Trp Arg Asn  
 115 120 125  
 Leu Arg Arg Ile Ala Ala Val Glu Ile Phe Ser Thr His Arg Leu Asn  
 130 135 140  
 Ser Phe Leu Tyr Ile Arg Lys Asp Glu Ile Arg Arg Leu Ile Ser His  
 145 150 155 160  
 Leu Ser Arg Asp Ser Leu His Gly Phe Val Glu Val Glu Met Lys Thr  
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Leu Leu Thr Asn Leu Ala Ser Asn Thr Thr Ile Arg Met Leu Ala Gly  
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Lys Arg Tyr Phe Gly Glu Asp Asn Asp Asp Ala Lys Leu Val Lys Asn  
195 200 205

Leu Val Ser Glu Ala Val Thr Ser Ala Gly Ala Gly Asn Pro Ile Asp  
210 215 220

Tyr Leu Ser Ile Leu Arg Trp Val Ser Ser Tyr Glu Lys Arg Ile Lys  
225 230 235 240

Asn Leu Gly Asn Arg Phe Asp Thr Phe Leu Gln Lys Leu Val Asp Glu  
245 250 255

Lys Arg Ala Glu Lys Glu Lys Gly Glu Thr Met Ile Asp His Leu Leu  
260 265 270

Ala Leu Gln Asp Ile Gln Pro Asp Tyr Tyr Thr Asp Val Ile Ile Lys  
275 280 285

Gly Ile Ile Leu Thr Leu Ile Ile Ala Gly Thr Asp Thr Ser Ser Val  
290 295 300

Thr Leu Glu Trp Ala Met Ser Asn Leu Leu Asn His Pro Glu Ile Leu  
305 310 315 320

Lys Lys Ala Arg Met Glu Ile Asp Glu Lys Val Gly Leu Asp Arg Leu  
325 330 335

Val Asp Glu Ser Asp Ile Val Asn Leu Ser Tyr Leu Gln Ser Ile Val  
340 345 350

Leu Glu Thr Leu Arg Met Tyr Pro Ala Val Pro Leu Leu Leu Pro His  
355 360 365

Leu Ser Ser Glu Asp Cys Lys Val Gly Gly Tyr Asp Ile Pro Ser Gly  
370 375 380

Thr Met Val Leu Thr Asn Ala Trp Ala Met His Arg Asp Pro Glu Val  
385 390 395 400

Trp Glu Asp Pro Glu Ile Phe Lys Pro Glu Arg Phe Glu Lys Glu Gly  
405 410 415

Glu Ala Glu Lys Leu Ile Ser Phe Gly Met Gly Arg Arg Ala Cys Pro  
420 425 430

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Gly Ala Gly Leu Ala His Arg Leu Ile Asn Gln Ala Leu Gly Ser Leu  
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Val Gln Cys Phe Glu Trp Glu Arg Val Gly Glu Asp Phe Val Asp Met  
450 455 460

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Met Cys Lys Ala Arg Ser Ile Val Asp Lys Leu Ile  
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<210> 2339

<211> 1551

<212> DNA

<213> Arabidopsis thaliana

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<211> 516

<212> PRT

<213> Arabidopsis thaliana

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Pro Thr Thr Ser Ser Leu Phe Asn Thr His His His Arg His His Leu  
 35 40 45

Ala Lys His Asn Tyr Lys Asp Ala Leu Thr Lys Ser Ile Leu Phe Phe  
 50 55 60

Glu Gly Gln Arg Ser Gly Lys Leu Pro Ser Asn Gln Arg Met Ser Trp  
 65 70 75 80

Arg Arg Asp Ser Gly Leu Ser Asp Gly Ser Ala Leu His Val Asp Leu  
 85 90 95

Val Gly Gly Tyr Tyr Asp Ala Gly Asp Asn Ile Lys Phe Gly Phe Pro  
 100 105 110

Met Ala Phe Thr Thr Thr Met Leu Ser Trp Ser Val Ile Glu Phe Gly  
 115 120 125

Gly Leu Met Lys Ser Glu Leu Gln Asn Ala Lys Ile Ala Ile Arg Trp  
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130

135

Ala Thr Asp Tyr Leu Leu Lys Ala Thr Ser Gln Pro Asp Thr Ile Tyr  
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Val Gln Val Gly Asp Ala Asn Lys Asp His Ser Cys Trp Glu Arg Pro  
165 170 175

Glu Asp Met Asp Thr Val Arg Ser Val Phe Lys Val Asp Lys Asn Ile  
180 185 190

Pro Gly Ser Asp Val Ala Ala Glu Thr Ala Ala Ala Leu Ala Ala Ala  
195 200 205

Ala Ile Val Phe Arg Lys Ser Asp Pro Ser Tyr Ser Lys Val Leu Leu  
210 215 220

Lys Arg Ala Ile Ser Val Phe Ala Phe Ala Asp Lys Tyr Arg Gly Thr  
225 230 235 240

Tyr Ser Ala Gly Leu Lys Pro Asp Val Cys Pro Phe Tyr Cys Ser Tyr  
245 250 255

Ser Gly Tyr Gln Asp Glu Leu Leu Trp Gly Ala Ala Trp Leu Gln Lys  
260 265 270

Ala Thr Lys Asn Ile Lys Tyr Leu Asn Tyr Ile Lys Ile Asn Gly Gln  
275 280 285

Ile Leu Gly Ala Ala Glu Tyr Asp Asn Thr Phe Gly Trp Asp Asn Lys  
290 295 300

His Ala Gly Ala Arg Ile Leu Leu Thr Lys Ala Phe Leu Val Gln Asn  
305 310 315 320

Val Lys Thr Leu His Glu Tyr Lys Gly His Ala Asp Asn Phe Ile Cys  
325 330 335

Ser Val Ile Pro Gly Ala Pro Phe Ser Ser Thr Gln Tyr Thr Pro Gly  
340 345 350

Gly Leu Leu Phe Lys Met Ala Asp Ala Asn Met Gln Tyr Val Thr Ser  
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Thr Ser Phe Leu Leu Leu Thr Tyr Ala Lys Tyr Leu Thr Ser Ala Lys  
370 375 380

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Thr Val Val His Cys Gly Gly Ser Val Tyr Thr Pro Gly Arg Leu Arg  
385 390 395 400

Ser Ile Ala Lys Arg Gln Val Asp Tyr Leu Leu Gly Asp Asn Pro Leu  
405 410 415

Arg Met Ser Tyr Met Val Gly Tyr Gly Pro Lys Phe Pro Arg Arg Ile  
420 425 430

His His Arg Gly Ser Ser Leu Pro Cys Val Ala Ser His Pro Ala Lys  
435 440 445

Ile Gln Cys His Gln Gly Phe Ala Ile Met Asn Ser Gln Ser Pro Asn  
450 455 460

Pro Asn Phe Leu Val Gly Ala Val Val Gly Gly Pro Asp Gln His Asp  
465 470 475 480

Arg Phe Pro Asp Glu Arg Ser Asp Tyr Glu Gln Ser Glu Pro Ala Thr  
485 490 495

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<211> 639

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<213> Arabidopsis thaliana

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tccacgtggg atgctgataa gccgtacgca tggcggagca agtatggctg gaccgccttc	360
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<211> 212

<212> PRT

<213> Arabidopsis thaliana

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 35 40 45  
 Ala Asp Tyr Cys Ser Pro Thr Asn Asn Cys Gln Ser Asn Cys Trp Gly  
 50 55 60  
 Ser Gly Pro Ser Gly Pro Gly Glu Ser Ala Ser Asn Val Arg Ala Thr  
 65 70 75 80  
 Tyr His Phe Tyr Asn Pro Ala Gln Asn Asn Trp Asp Leu Arg Ala Val  
 85 90 95  
 Ser Ala Tyr Cys Ser Thr Trp Asp Ala Asp Lys Pro Tyr Ala Trp Arg  
 100 105 110  
 Ser Lys Tyr Gly Trp Thr Ala Phe Cys Gly Pro Ala Gly Pro Arg Gly  
 115 120 125  
 Gln Ala Ser Cys Gly Lys Cys Leu Arg Val Lys Asn Thr Arg Thr Asn  
 130 135 140  
 Ala Ala Val Thr Val Arg Ile Val Asp Gln Cys Ser Asn Gly Gly Leu  
 145 150 155 160  
 Asp Leu Asp Val Ala Met Phe Asn Gln Ile Asp Thr Asp Gly Phe Gly  
 165 170 175



Tyr Gln Gln Gly His Leu Ile Val Asp Tyr Gln Phe Val Asp Cys Gly  
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Asn Glu Leu Ile Gly Gln Pro Asp Ser Arg Asn Met Leu Val Ser Ala  
 195 200 205

Ile Asp Arg Val  
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<212> DNA

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1230

&lt;210&gt; 2344

&lt;211&gt; 409

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2344

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35 40 45Ala Thr Ser Lys Ser Lys Lys Gly Thr Lys Lys Glu Ile Gln Glu Ser  
50 55 60Leu Leu Thr Pro Arg Phe Tyr Thr Thr Asp Phe Glu Glu Met Glu Gln  
65 70 75 80Leu Phe Asn Thr Glu Ile Asn Lys Asn Leu Asn Glu Ala Glu Phe Glu  
85 90 95Ala Leu Leu Gln Glu Phe Lys Thr Asp Tyr Asn Gln Thr His Phe Val  
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115 120 125Arg Gln Ile Phe Val Glu Phe Leu Glu Arg Ser Cys Thr Ala Glu Phe  
130 135 140Ser Gly Phe Leu Leu Tyr Lys Glu Leu Gly Arg Arg Leu Lys Lys Thr  
145 150 155 160Asn Pro Val Val Ala Glu Ile Phe Ser Leu Met Ser Arg Asp Glu Ala  
165 170 175Arg His Ala Gly Phe Leu Asn Lys Gly Leu Ser Asp Phe Asn Leu Ala  
180 185 190

Leu Asp Leu Gly Phe Leu Thr Lys Ala Arg Lys Tyr Thr Phe Phe Lys  
 195 200 205  
 Pro Lys Phe Ile Phe Tyr Ala Thr Tyr Leu Ser Glu Lys Ile Gly Tyr  
 210 215 220  
 Trp Arg Tyr Ile Thr Ile Tyr Arg His Leu Lys Glu Asn Pro Glu Phe  
 225 230 235 240  
 Gln Cys Tyr Pro Ile Phe Lys Tyr Phe Glu Asn Trp Cys Gln Asp Glu  
 245 250 255  
 Asn Arg His Gly Asp Phe Phe Ser Ala Leu Met Lys Ala Gln Pro Gln  
 260 265 270  
 Phe Leu Asn Asp Trp Gln Ala Lys Leu Trp Ser Arg Phe Phe Cys Leu  
 275 280 285  
 Ser Val Tyr Val Thr Met Tyr Leu Asn Asp Cys Gln Arg Thr Asn Phe  
 290 295 300  
 Tyr Glu Gly Ile Gly Leu Asn Thr Lys Glu Phe Asp Met His Val Ile  
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 Ile Glu Thr Asn Arg Thr Thr Ala Arg Ile Phe Pro Ala Val Leu Asp  
 325 330 335  
 Val Glu Asn Pro Glu Phe Lys Arg Lys Leu Asp Arg Met Val Val Ser  
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 Tyr Glu Lys Leu Leu Ala Ile Gly Glu Thr Asp Asp Ala Ser Phe Ile  
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 Lys Thr Leu Lys Arg Ile Pro Leu Val Thr Ser Leu Ala Ser Glu Ile  
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&lt;211&gt; 2181

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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gcagcctgta atgcgatgga aacccttctt gtacataaag atttggagca gaatggtttt   1680
ctcgatgacg ttatttatgt tctgcaaacc aaaggcgtca ctttgtatgg tgggccaaaga   1740
gcaagtgcga aactgaatat tccggaaaca aaatcatttc accacagagta cagttccaag   1800

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047-E2F-PCT.ST25.txt

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 ggaagtgcac acactgattg catagtgcac gaagatagtg aagtagcaga aatattcctc 1920  
 cgccaagtgg acagtgcctg tgttttcac aatgcaagca caagattctc tgatgggttt 1980  
 aggttcggac ttggtgctga ggtgggaata agcacaagca ggattcatgc cctgggtcca 2040  
 gttggagttg aaggattatt gacaacaaga tggataatga gaggaaaggg acaagttgtg 2100  
 gatggagaca atggaatcgt ttacacccat aaggatcttc ctgtcttaca aaggacagag 2160  
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<210> 2346

<211> 726

<212> PRT

<213> Arabidopsis thaliana

<400> 2346

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Leu Ala Leu Gly Arg Leu Gly Ala Ile Cys Glu Gln Leu Ala Glu Leu  
 35 40 45

Asn Ser Asp Gly Phe Glu Val Ile Leu Val Ser Ser Gly Ala Val Gly  
 50 55 60

Leu Gly Arg Gln Arg Leu Arg Tyr Arg Gln Leu Val Asn Ser Ser Phe  
 65 70 75 80

Ala Asp Leu Gln Lys Pro Gln Met Glu Leu Asp Gly Lys Ala Cys Ala  
 85 90 95

Gly Val Gly Gln Ser Ser Leu Met Ala Tyr Tyr Glu Thr Met Phe Asp  
 100 105 110

Gln Leu Asp Val Thr Val Ala Gln Met Leu Val Thr Asp Ser Ser Phe  
 115 120 125

Arg Asp Lys Asp Phe Arg Lys Gln Leu Ser Glu Thr Val Lys Ala Met  
 130 135 140

047-E2F-PCT.ST25.txt

Leu Arg Met Arg Val Ile Pro Val Phe Asn Glu Asn Asp Ala Ile Ser  
 145 150 155 160  
 Thr Arg Arg Ala Pro Tyr Lys Asp Ser Thr Gly Ile Phe Trp Asp Asn  
 165 170 175  
 Asp Ser Leu Ala Ala Leu Leu Ser Leu Glu Leu Lys Ala Asp Leu Leu  
 180 185 190  
 Ile Leu Leu Ser Asp Val Glu Gly Leu Tyr Thr Gly Pro Ser Asp  
 195 200 205  
 Ser Thr Ser Lys Leu Ile His Thr Phe Ile Lys Glu Lys His Gln Asp  
 210 215 220  
 Glu Ile Thr Phe Gly Glu Lys Ser Lys Leu Gly Arg Gly Gly Met Thr  
 225 230 235 240  
 Ala Lys Val Lys Ala Ala Val Asn Ala Ala Tyr Gly Gly Val Pro Val  
 245 250 255  
 Ile Ile Thr Ser Gly Tyr Ala Ala Glu Asn Ile Ser Lys Val Leu Arg  
 260 265 270  
 Gly Leu Arg Val Gly Thr Leu Phe His Gln Asp Ala His Leu Trp Ala  
 275 280 285  
 Pro Val Val Asp Thr Thr Ser Arg Asp Met Ala Val Ala Ala Arg Glu  
 290 295 300  
 Ser Ser Arg Lys Leu Gln Ala Leu Ser Ser Glu Asp Arg Lys Gln Ile  
 305 310 315 320  
 Leu His Asp Ile Ala Asn Ala Leu Glu Val Asn Glu Lys Thr Ile Lys  
 325 330 335  
 Ala Glu Asn Asp Leu Asp Val Ala Ala Ala Gln Glu Ala Gly Tyr Glu  
 340 345 350  
 Glu Ser Leu Val Ala Arg Leu Val Met Lys Pro Gly Lys Ile Ser Ser  
 355 360 365  
 Leu Ala Ala Ser Val Arg Gln Leu Ala Glu Met Glu Asp Pro Ile Gly  
 370 375 380  
 Arg Val Leu Lys Lys Thr Gln Val Ala Asp Asp Leu Ile Leu Glu Lys  
 385 390 395 400

047-E2F-PCT.ST25.txt

Thr Ser Ser Pro Ile Gly Val Leu Leu Ile Val Phe Glu Ser Arg Pro  
405 410 415

Asp Ala Leu Val Gln Ile Ala Ser Leu Ala Ile Arg Ser Gly Asn Gly  
420 425 430

Leu Leu Leu Lys Gly Gly Lys Glu Ala Arg Arg Ser Asn Ala Ile Leu  
435 440 445

His Lys Val Ile Thr Asp Ala Ile Pro Glu Thr Val Gly Gly Lys Leu  
450 455 460

Ile Gly Leu Val Thr Ser Arg Glu Glu Ile Pro Asp Leu Leu Lys Leu  
465 470 475 480

Asp Asp Val Ile Asp Leu Val Ile Pro Arg Gly Ser Asn Lys Leu Val  
485 490 495

Ser Gln Ile Lys Asn Ser Thr Lys Ile Pro Val Leu Gly His Ala Asp  
500 505 510

Gly Ile Cys His Val Tyr Val Asp Lys Ser Gly Lys Leu Asp Met Ala  
515 520 525

Lys Arg Ile Val Ser Asp Ala Lys Leu Asp Tyr Pro Ala Ala Cys Asn  
530 535 540

Ala Met Glu Thr Leu Leu Val His Lys Asp Leu Glu Gln Asn Gly Phe  
545 550 555 560

Leu Asp Asp Leu Ile Tyr Val Leu Gln Thr Lys Gly Val Thr Leu Tyr  
565 570 575

Gly Gly Pro Arg Ala Ser Ala Lys Leu Asn Ile Pro Glu Thr Lys Ser  
580 585 590

Phe His His Glu Tyr Ser Ser Lys Ala Cys Thr Val Glu Ile Val Glu  
595 600 605

Asp Val Tyr Gly Ala Ile Asp His Ile His Gln His Gly Ser Ala His  
610 615 620

Thr Asp Cys Ile Val Thr Glu Asp Ser Glu Val Ala Glu Ile Phe Leu  
625 630 635 640

Arg Gln Val Asp Ser Ala Ala Val Phe His Asn Ala Ser Thr Arg Phe

Ser Asp Gly Phe Arg Phe Gly Leu Gly Ala Glu Val Gly Ile Ser Thr  
660 665 670

Ser Arg Ile His Ala Arg Gly Pro Val Gly Val Glu Gly Leu Leu Thr  
675 680 685

Thr Arg Trp Ile Met Arg Gly Lys Gly Gln Val Val Asp Gly Asp Asn  
690 695 700

Gly Ile Val Tyr Thr His Lys Asp Leu Pro Val Leu Gln Arg Thr Glu  
705 710 715 720

Ala Val Glu Asn Gly Ile  
725

<210> 2347

<211> 573

<212> DNA

<213> Arabidopsis thaliana

<400> 2347  
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cccgtcgagt ccaaagctct tgccgttgta gaaaaacca tcgaggagca tacacctaag 180  
aaagcttcat ctggttcggc cgatagagat gtgatacttg ccgacttgga aaaagagaag 240  
aaaacgtcat tcatacaagc atgggaagag agtgagaagt caaaggctga gaacagggca 300  
caaaagaaga tctctgatgt gcatgcttgg gaaaatagca agaaagcagc cgtagaagct 360  
caacttagga agatcgagga aaaattagag aagaaaaaag cgagtagcgg tgagaaaatg 420  
aagaacaaag tagctgcaat ccacaagtta gcagaagaga agagagcaat gtttgaaagt 480  
aaaaaaggag aagagcttct caaagctgaa gaaatgggtg ctaagtatag agccactggt 540  
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<210> 2348

<211> 190

<212> PRT

<213> Arabidopsis thaliana



&lt;400&gt; 2348

Met Ala Glu Glu Gln Lys Thr Ser Lys Val Asp Val Glu Ser Pro Ala  
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20 25 30Asp Glu Lys Ile His Asn Pro Pro Pro Val Glu Ser Lys Ala Leu Ala  
35 40 45Val Val Glu Lys Pro Ile Glu Glu His Thr Pro Lys Lys Ala Ser Ser  
50 55 60Gly Ser Ala Asp Arg Asp Val Ile Leu Ala Asp Leu Glu Lys Glu Lys  
65 70 75 80Lys Thr Ser Phe Ile Lys Ala Trp Glu Glu Ser Glu Lys Ser Lys Ala  
85 90 95Glu Asn Arg Ala Gln Lys Lys Ile Ser Asp Val His Ala Trp Glu Asn  
100 105 110Ser Lys Lys Ala Ala Val Glu Ala Gln Leu Arg Lys Ile Glu Glu Lys  
115 120 125Leu Glu Lys Lys Lys Ala Gln Tyr Gly Glu Lys Met Lys Asn Lys Val  
130 135 140Ala Ala Ile His Lys Leu Ala Glu Glu Lys Arg Ala Met Val Glu Ala  
145 150 155 160Lys Lys Gly Glu Glu Leu Leu Lys Ala Glu Glu Met Gly Ala Lys Tyr  
165 170 175Arg Ala Thr Gly Val Val Pro Lys Ala Thr Cys Gly Cys Phe  
180 185 190

&lt;210&gt; 2349

&lt;211&gt; 1023

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2349

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tttaagcctc caccaccgcg aatctgcggc catcctaacg gtcctccggg tacttctccg    120
agaatcaagc tcagtgatgg aagatatctt gcttatagag aatctggggg ttagtagagac    180
aatgctaact acaagatcat tgtcgttcat ggcttcaaca gctccaaaga cactgaattt    240
cccatcccta aggatgtaat tgaggagctt gggatatact ttgtgttcta ctagatagaca    300
ggatattggg aaagtgatcc acacccatca cgcactgtta agagtgaagc atacgacatt    360
caagaactcg ccgataaact caagatcgga ccaaagtctt atgttcttgg tatatcacta    420
gggtgttact cggtttatag ttgcctcaaa tacattcccc acagactagc tggagcagtc    480
ttaatgggtc catttgtgaa ctattgggtg actaaagtgc ctcaagaaaa attgagtaaa    540
gcgttgagac taatgccaaa gaaagaccaa tggacgttta aagtgggtca ttatgttccg    600
tggttgttat attggtggtt gacccaaaaa ctatttccgt ctctgagtat ggtcacgggg    660
aacaatgcgt tatgcagcga caaagatttg gtcgtcataa agaagaaaat ggagaatcca    720
cgccctggct tggaaaaagt tagacaacaa ggagaccatg aatgtcttca ccgggacatg    780
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ggcgaaggat cggtcacagt ttggcaaggg atggaagaca gaatcattcc atacgaaatt    900
aatcgatata tatcagagaa gcttccatgg attaagtacc atgaggtctt aggttatgga    960
catcttctaa acgccgagga ggagaaatgc aaagacatta tcaaggcact tcttgtcaac 1020
tga 1023

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&lt;210&gt; 2350

&lt;211&gt; 340

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2350

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Met Met Phe Ser Val Thr Val Ala Ile Leu Val Cys Leu Ile Gly Tyr
1           5           10          15

```

```

Ile Tyr Arg Ser Phe Lys Pro Pro Pro Arg Ile Cys Gly His Pro
20          25          30

```

```

Asn Gly Pro Pro Val Thr Ser Pro Arg Ile Lys Leu Ser Asp Gly Arg
35          40          45

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Tyr Leu Ala Tyr Arg Glu Ser Gly Val Asp Arg Asp Asn Ala Asn Tyr
50          55          60

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Lys Ile Ile Val Val His Gly Phe Asn Ser Ser Lys Asp Thr Glu Phe  
 65 70 75 80  
 Pro Ile Pro Lys Asp Val Ile Glu Glu Leu Gly Ile Tyr Phe Val Phe  
 85 90 95  
 Tyr Asp Arg Ala Gly Tyr Gly Glu Ser Asp Pro His Pro Ser Arg Thr  
 100 105 110  
 Val Lys Ser Glu Ala Tyr Asp Ile Gln Glu Leu Ala Asp Lys Leu Lys  
 115 120 125  
 Ile Gly Pro Lys Phe Tyr Val Leu Gly Ile Ser Leu Gly Ala Tyr Ser  
 130 135 140  
 Val Tyr Ser Cys Leu Lys Tyr Ile Pro His Arg Leu Ala Gly Ala Val  
 145 150 155 160  
 Leu Met Val Pro Phe Val Asn Tyr Trp Trp Thr Lys Val Pro Gln Glu  
 165 170 175  
 Lys Leu Ser Lys Ala Leu Glu Leu Met Pro Lys Lys Asp Gln Trp Thr  
 180 185 190  
 Phe Lys Val Ala His Tyr Val Pro Trp Leu Leu Tyr Trp Trp Leu Thr  
 195 200 205  
 Gln Lys Leu Phe Pro Ser Ser Ser Met Val Thr Gly Asn Asn Ala Leu  
 210 215 220  
 Cys Ser Asp Lys Asp Leu Val Val Ile Lys Lys Lys Met Glu Asn Pro  
 225 230 235 240  
 Arg Pro Gly Leu Glu Lys Val Arg Gln Gln Gly Asp His Glu Cys Leu  
 245 250 255  
 His Arg Asp Met Ile Ala Gly Phe Ala Thr Trp Glu Phe Asp Pro Thr  
 260 265 270  
 Glu Leu Glu Asn Pro Phe Ala Glu Gly Glu Gly Ser Val His Val Trp  
 275 280 285  
 Gln Gly Met Glu Asp Arg Ile Ile Pro Tyr Glu Ile Asn Arg Tyr Ile  
 290 295 300  
 Ser Glu Lys Leu Pro Trp Ile Lys Tyr His Glu Val Leu Gly Tyr Gly  
 Page 3357

305

310

320

His Leu Leu Asn Ala Glu Glu Glu Lys Cys Lys Asp Ile Ile Lys Ala  
325 330 335

Leu Leu Val Asn  
340

&lt;210&gt; 2351

&lt;211&gt; 831

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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ggtccttctt ctgatgggtg aagccgatcc ggagctttat ccatgaccgc agacgagaac 180  
ccattctctc atgggtcaagg tctttacatc aatcaaatcc cattcaaacc ttcaaact 240  
tcttctcctt tttcatttga aacttcttcc actttctcca tcaactcctc caccaaacct 300  
aactccgggc aagggttctgc cttcatcata accccggaag ctgataactc cgggtgctca 360  
gatggcggat atctcgggat cctcaacaaa accaacgatg gaaagccaga gaaccacatc 420  
ttggctatcg aattcgatc ttttcagaac aaagagtctc tagacattag tggtaaccat 480  
gttggagtta acatcaactc aatgacttct cttgtcgtcg agaaagctgg ttactggggt 540  
cagacaagag tcgggaaaag gaaagtttg tcgttttaag atgtgaatct tagcagtggg 600  
gagaggttca aggcttgggt tgagttcaga aacaagact ctacgattac ggttacactc 660  
gcgcctgaaa acgttaagaa acctaagcgg gctttgatcg aagctccag agtgctcaat 720  
gaagtctctc ttcaaaacat gtacgccggt tttgctggtt ccatgggacg tgccgttgag 780  
cgtcacgata tttggagctg gtcgtttgaa aacgccgcca aaaacaacta a 831

&lt;210&gt; 2352

&lt;211&gt; 276

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2352

Met Gln Ile His Lys Leu Cys Phe Leu Val Leu Phe Leu Ala Asn Ala  
 1 5 10 15  
 Ala Phe Ala Val Lys Phe Asn Phe Asp Ser Phe Asp Gly Ser Asn Leu  
 20 25 30  
 Leu Phe Leu Gly Asp Ala Glu Leu Gly Pro Ser Ser Asp Gly Val Ser  
 35 40 45  
 Arg Ser Gly Ala Leu Ser Met Thr Arg Asp Glu Asn Pro Phe Ser His  
 50 55 60  
 Gly Gln Gly Leu Tyr Ile Asn Gln Ile Pro Phe Lys Pro Ser Asn Thr  
 65 70 75 80  
 Ser Ser Pro Phe Ser Phe Glu Thr Ser Phe Thr Phe Ser Ile Thr Pro  
 85 90 95  
 Arg Thr Lys Pro Asn Ser Gly Gln Gly Phe Ala Phe Ile Ile Thr Pro  
 100 105 110  
 Glu Ala Asp Asn Ser Gly Ala Ser Asp Gly Gly Tyr Leu Gly Ile Leu  
 115 120 125  
 Asn Lys Thr Asn Asp Gly Lys Pro Glu Asn His Ile Leu Ala Ile Glu  
 130 135 140  
 Phe Asp Thr Phe Gln Asn Lys Glu Phe Leu Asp Ile Ser Gly Asn His  
 145 150 155 160  
 Val Gly Val Asn Ile Asn Ser Met Thr Ser Leu Val Ala Glu Lys Ala  
 165 170 175  
 Gly Tyr Trp Val Gln Thr Arg Val Gly Lys Arg Lys Val Trp Ser Phe  
 180 185 190  
 Lys Asp Val Asn Leu Ser Ser Gly Glu Arg Phe Lys Ala Trp Val Glu  
 195 200 205  
 Phe Arg Asn Lys Asp Ser Thr Ile Thr Val Thr Leu Ala Pro Glu Asn  
 210 215 220  
 Val Lys Lys Pro Lys Arg Ala Leu Ile Glu Ala Pro Arg Val Leu Asn  
 225 230 235 240  
 Glu Val Leu Leu Gln Asn Met Tyr Ala Gly Phe Ala Gly Ser Met Gly  
 245 250 255

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Arg Ala Val Glu Arg His Asp Ile Trp Ser Trp Ser Phe Glu Asn Ala  
260 265 270

Ala Lys Asn Asn  
275

<210> 2353

<211> 1056

<212> DNA

<213> Arabidopsis thaliana

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tcttacagtc tcacgctgaa tcttgagggtg acgacaagag agttgagaga cgagcgacca 180  
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aatccgaaag gcggtataaa taatcatatt tcactttacg cgaggataga agagacagaa 360  
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gagtggggat tcacacaatt gatttctctt ccaacattct acaacgcgaa cgaagggtac 540  
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caagagaaag tcacattcat atcaaacctt ccagacaatg ttttcacttg gaagatactt 660  
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tggtaccgga ttccaagcga ttatggtgtg ggagtgaaca atataatatt gatgtcagag 960  
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gttaagggtct ctgtgacaaa catagtctcc gtttaa 1056

<210> 2354

<211> 351

<212> PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2354

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Phe Ile Thr Ser Ser Ser Ala Glu Leu Ile Ile Lys Gln Val Thr Gln
          20          25          30

Gly Arg Gly Ile Glu Tyr Asn Asn Ser Tyr Ser Leu Thr Ser Asn Leu
 35          40          45

Gly Val Thr Thr Arg Glu Leu Arg Asp Glu Arg Pro Ser Ser Lys Ile
 50          55          60

Val Thr Ile Thr Ser Phe Ser Val Ile Lys Asp Arg Gly Glu Pro Tyr
 65          70          75          80

Glu Ser Ser Ile Phe Glu Ala Ala Gly Tyr Lys Trp Arg Leu Val Leu
          85          90          95

Tyr Val Lys Gly Asn Pro Lys Gly Gly Ile Asn Asn His Ile Ser Leu
          100          105          110

Tyr Ala Arg Ile Glu Glu Thr Glu Thr Leu Pro Arg Gly Trp Glu Val
          115          120          125

Asn Val Asp Leu Lys Leu Phe Val His Asn Arg Lys Leu Lys Lys Tyr
          130          135          140

Leu Ser Val Thr Asp Gly Thr Val Lys Arg Tyr Asn Asp Ala Lys Lys
          145          150          155          160

Glu Trp Gly Phe Thr Gln Leu Ile Ser Leu Pro Thr Phe Tyr Asn Ala
          165          170          175

Asn Glu Gly Tyr Leu Val Gln Asp Thr Ala Ser Phe Gly Ala Glu Ile
          180          185          190

Phe Ile Val Asn Pro Thr Glu Lys Gln Glu Lys Val Thr Phe Ile Ser
          195          200          205

Asn Pro Pro Asp Asn Val Phe Thr Trp Lys Ile Leu Arg Phe Ser Thr
          210          215          220

Leu Glu Asp Lys Phe Tyr Tyr Ser Asp Asp Phe Leu Val Gly Asp Arg
          3361

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225 230 235 240

Tyr Trp Arg Leu Gly Phe Asn Pro Lys Gly Ser Gly Gly Gly Arg Pro  
245 250 255

His Ala Leu Pro Ile Phe Leu Tyr Ala Gln Gly His Lys Ala Asn Ala  
260 265 270

Val Val Thr Asn Thr Trp Gly Ala Val Asn Leu Arg Leu Lys Asn Gln  
275 280 285

Arg Ser Ser Asn His Lys Gln Leu Tyr Ser Ala Ala Trp Tyr Pro Ile  
290 295 300

Arg Ser Asp Tyr Gly Val Gly Val Asn Asn Ile Ile Leu Met Ser Glu  
305 310 315 320

Leu Lys Asp Ala Ser Lys Gly Tyr Met Val Asn Asp Ala Ile Ile Phe  
325 330 335

Glu Ala Glu Met Val Lys Val Ser Val Thr Asn Ile Val Ser Val  
340 345 350

<210> 2355

<211> 783

<212> DNA

<213> Arabidopsis thaliana

<400> 2355

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gctcgttctc ctggaattgc attatcttcg agattgcact atgcatcacc cattaagcaa    180
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 tga 783

<210> 2356

<211> 260

<212> PRT

<213> Arabidopsis thaliana

<400> 2356

Met Ala Ser Ser Ser Ser Met Gln Met Val His Thr Ser Arg Ser Ile  
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Ala Gln Ile Gly Phe Gly Val Lys Ser Gln Leu Val Ser Ala Asn Arg  
 20 25 30

Thr Thr Gln Ser Val Cys Phe Gly Ala Arg Ser Ser Gly Ile Ala Leu  
 35 40 45

Ser Ser Arg Leu His Tyr Ala Ser Pro Ile Lys Gln Phe Ser Gly Val  
 50 55 60

Tyr Ala Thr Thr Lys His Gln Arg Thr Ala Cys Val Lys Ser Met Ala  
 65 70 75 80

Ala Glu Glu Glu Glu Val Ile Glu Pro Gln Ala Lys Val Thr Asn Lys  
 85 90 95

Val Tyr Phe Asp Val Glu Ile Gly Gly Glu Val Ala Gly Arg Ile Val  
 100 105 110

Met Gly Leu Phe Gly Glu Val Val Pro Lys Thr Val Glu Asn Phe Arg  
 115 120 125

Ala Leu Cys Thr Gly Glu Lys Lys Tyr Gly Tyr Lys Gly Ser Ser Phe  
 130 135 140

His Arg Ile Ile Lys Asp Phe Met Ile Gln Gly Gly Asp Phe Thr Glu  
 145 150 155 160

Gly Asn Gly Thr Gly Gly Ile Ser Ile Tyr Gly Ala Lys Phe Glu Asp  
 165 170 175

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Glu Asn Phe Thr Leu Lys His Thr Gly Pro Gly Ile Leu Ser Met Ala  
180 185 190

Asn Ala Gly Pro Asn Thr Asn Gly Ser Gln Phe Phe Ile Cys Thr Val  
195 200 205

Lys Thr Ser Trp Leu Asp Asn Lys His Val Val Phe Gly Gln Val Ile  
210 215 220

Glu Gly Met Lys Leu Val Arg Thr Leu Glu Ser Gln Glu Thr Arg Ala  
225 230 235 240

Phe Asp Val Pro Lys Lys Gly Cys Arg Ile Tyr Ala Cys Gly Glu Leu  
245 250 255

Pro Leu Asp Ala  
260

<210> 2357

<211> 1122

<212> DNA

<213> Arabidopsis thaliana

<400> 2357  
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gagagattca gcaaaactatt taaccagacc ggttttacca ttgcggttgt gaagaaggct 600  
cttgaagttt accaaggctt caaagggtgt aatgttttag ttgatgtggg aggaggagtt 660  
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 aacattgcct ttgacatgga catgttaatg ttcacacaat gttccggagg aaaagagaga 1020  
 tcaagagctg agtttgaagc ttggctgca gcttctggtt ttaccattg caagtctggt 1080  
 tgccaagctt atcactgctg gattattgag ttctgtaaat aa 1122

&lt;210&gt; 2358

&lt;211&gt; 373

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2358

Met Gly Tyr Leu Leu Glu Glu Thr Leu Ser Ser Asn Ser Lys Thr Pro  
 1 5 10

Ile Val Ile Asp Asp Asp Asn Glu Leu Gly Leu Met Ala Val Arg Leu  
 20 25 30

Ala Asn Ala Ala Ala Phe Pro Met Val Leu Lys Ala Ala Leu Glu Leu  
 35 40 45

Gly Val Phe Asp Thr Leu Tyr Ala Glu Ala Ser Arg Ser Asp Ser Phe  
 50 55 60

Leu Ser Pro Ser Glu Ile Ala Ser Lys Leu Pro Thr Thr Pro Arg Asn  
 65 70 75 80

Pro Glu Ala Pro Val Leu Leu Asp Arg Met Leu Arg Leu Leu Ala Ser  
 85 90 95

Tyr Ser Val Val Lys Cys Gly Lys Val Ser Glu Gly Lys Gly Glu Arg  
 100 105 110

Val Tyr Arg Ala Glu Pro Ile Cys Arg Phe Phe Leu Lys Asp Asn Ile  
 115 120 125

Gln Asp Ile Gly Ser Leu Ala Ser Gln Val Ile Val Asn Phe Asp Ser  
 130 135 140

Val Phe Leu Asn Thr Trp Ala Gln Leu Lys Asp Val Val Leu Glu Gly  
 145 150 155 160

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Gly Asp Ala Phe Gly Arg Ala His Gly Gly Met Lys Leu Phe Asp Tyr  
165 170 175

Met Gly Thr Asp Glu Arg Phe Ser Lys Leu Phe Asn Gln Thr Gly Phe  
180 185 190

Thr Ile Ala Val Val Lys Lys Ala Leu Glu Val Tyr Gln Gly Phe Lys  
195 200 205

Gly Val Asn Val Leu Val Asp Val Gly Gly Gly Val Gly Asn Thr Leu  
210 215 220

Gly Val Val Ala Ser Lys Tyr Pro Asn Ile Lys Gly Ile Asn Phe Asp  
225 230 235 240

Leu Thr Cys Ala Leu Ala Gln Ala Pro Ser Tyr Pro Gly Val Glu His  
245 250 255

Val Ala Gly Asp Met Phe Val Asp Val Pro Thr Gly Asp Ala Met Ile  
260 265 270

Leu Lys Arg Ile Leu His Asp Trp Thr Asp Glu Asp Cys Val Lys Ile  
275 280 285

Leu Lys Asn Cys Trp Lys Ser Leu Pro Glu Ser Gly Lys Val Val Val  
290 295 300

Ile Glu Leu Val Thr Pro Asp Glu Ala Glu Asn Gly Asp Ile Asn Ala  
305 310 315 320

Asn Ile Ala Phe Asp Met Asp Met Leu Met Phe Thr Gln Cys Ser Gly  
325 330 335

Gly Lys Glu Arg Ser Arg Ala Glu Phe Glu Ala Leu Ala Ala Ala Ser  
340 345 350

Gly Phe Thr His Cys Lys Phe Val Cys Gln Ala Tyr His Cys Trp Ile  
355 360 365

Ile Glu Phe Cys Lys  
370

<210> 2359

<211> 552

<212> DNA

<213> *Arabidopsis thaliana*

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 cggcatgtac gtgttggttt agctgaacca agcaatgcc catgctgtga tatatgcgaa 180  
 aatgcacctg ctttctttta ctgtgagata gacggtagt ttctttgtct gcaatgtgac 240  
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 ctaaagtcta atccacaaag agtacatgag ccatcatcaa ataacaacgg gattgatgta 480  
 aataacgaga acaatcacga gcctgcaggc cttgtaccag ttggaccctt taaacgagag 540  
 tctgagaagt ga 552

&lt;210&gt; 2360

&lt;211&gt; 183

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

<400> 2360  
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 Cys Ala Ala Asp Glu Ala Ala Leu Cys Arg Pro Cys Asp Glu Lys Val  
 20 25 30  
 His Met Cys Asn Lys Leu Ala Ser Arg His Val Arg Val Gly Leu Ala  
 35 40 45  
 Glu Pro Ser Asn Ala Pro Cys Cys Asp Ile Cys Glu Asn Ala Pro Ala  
 50 55 60  
 Phe Phe Tyr Cys Glu Ile Asp Gly Ser Ser Leu Cys Leu Gln Cys Asp  
 65 70 75 80  
 Met Val Val His Val Gly Gly Lys Arg Thr His Gly Arg Phe Leu Leu  
 85 90 95  
 Leu Arg Gln Arg Ile Glu Phe Pro Gly Asp Lys Pro Lys Glu Asn Asn  
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Thr Arg Asp Asn Leu Gln Asn Gln Arg Val Ser Thr Asn Gly Asn Gly  
115 120

Glu Ala Asn Gly Lys Ile Asp Asp Glu Met Ile Asp Leu Asn Ala Asn  
130 135 140

Pro Gln Arg Val His Glu Pro Ser Ser Asn Asn Asn Gly Ile Asp Val  
145 150 155 160

Asn Asn Glu Asn Asn His Glu Pro Ala Gly Leu Val Pro Val Gly Pro  
165 170 175

Phe Lys Arg Glu Ser Glu Lys  
180

<210> 2361

<211> 468

<212> DNA

<213> Arabidopsis thaliana

<400> 2361  
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cacaacaagc cagtcgaagg aaccgaaaca gctacaagac cagctaccaa gcccgagctc 120  
atggcaagtg ccaaggttgt agctgaagct gctcaagccg cagctcgtaa cgaatcagac 180  
aaactcgaca agggtaaatg cgccggagcc tctgctgata tcttagacgc tgccgagaaa 240  
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ctcaacgact acgagtcgtc acactccacc ggtgctggtg gtcctcctcc tccgacgagt 360  
caggctgagc cagcaagta gctgagccg gcggctaaga aagacgatga agagtctggt 420  
ggtgggcttg gaggttatgc caagatggct caaggtttct tgaagtga 468

<210> 2362

<211> 155

<212> PRT

<213> Arabidopsis thaliana

<400> 2362

Met Asn Phe Ile Ser Asp Gln Val Lys Lys Leu Ser Ser Ser Thr Pro  
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Glu Glu Pro Asp His Asn Lys Pro Val Glu Gly Thr Glu Thr Ala Thr  
 20 25 30

Arg Pro Ala Thr Asn Ala Glu Leu Met Ala Ser Ala Lys Val Val Ala  
 35 40 45

Glu Ala Ala Gln Ala Ala Ala Arg Asn Glu Ser Asp Lys Leu Asp Lys  
 50 55 60

Gly Lys Val Ala Gly Ala Ser Ala Asp Ile Leu Asp Ala Ala Glu Lys  
 65 70 75 80

Tyr Gly Lys Phe Asp Glu Lys Ser Ser Thr Gly Gln Tyr Leu Asp Lys  
 85 90 95

Ala Glu Lys Tyr Leu Asn Asp Tyr Glu Ser Ser His Ser Thr Gly Ala  
 100 105 110

Gly Gly Pro Pro Pro Pro Thr Ser Gln Ala Glu Pro Ala Ser Gln Pro  
 115 120 125

Glu Pro Ala Ala Lys Lys Asp Asp Glu Glu Ser Gly Gly Gly Leu Gly  
 130 135 140

Gly Tyr Ala Lys Met Ala Gln Gly Phe Leu Lys  
 145 150 155

<210> 2363

<211> 996

<212> DNA

<213> Arabidopsis thaliana

<400> 2363

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tcttcacaag ctaggctcac gtgctctctc cactctgacc tcaaagactt cgctggaaaa	180
tgctccgacg ccgccaagat cgccggtttt gctctagcca cctctgctct cgttgctctg	240
ggggccgggtg cggaggagac accaaagagg ctaacgtacg acgagataca gagcaagact	300
tacatggagg taaagggtac cggtacggca aaccagtgtc caactatcga tgggtgctct	360

gagacattct cgttcaaagc tggttaagtac acaggcaaga agttctgctt cgagccact 420  
 tccttcaccg tcaaggcaga tagcgtcagc aagaatgcac cgccggattt ccaaaacacc 480  
 aagctcatga cccgtctcac ttacacactc gatgagatcg aaggaccctt cgaggttggt 540  
 tcagacggaa gcgtgaagtt caaggaagaa gatggtatcg attacgcagc agtcacagtc 600  
 cagcttcctg gaggagaacg cgtgccgttc ctcttcacgg ttaagcagct cgaggcttca 660  
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 gtcggagaga tcactttgaa gatcacaag agcaaacgg agacaggtga agtgatcgga 900  
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<210> 2364

<211> 331

<212> PRT

<213> *Arabidopsis thaliana*

<400> 2364

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Ile Ala Ala Ser Pro Ser Arg Asn Val His Leu Arg Ser Asn Gln Thr  
20 25 30

Val Gly Lys Ser Phe Gly Leu Asp Ser Ser Gln Ala Arg Leu Thr Cys  
35 40 45

Ser Leu His Ser Asp Leu Lys Asp Phe Ala Gly Lys Cys Ser Asp Ala  
50 55 60

Ala Lys Ile Ala Gly Phe Ala Leu Ala Thr Ser Ala Leu Val Val Ser  
65 70 75 80

Gly Ala Gly Ala Glu Gly Ala Pro Lys Arg Leu Thr Tyr Asp Glu Ile  
85 90 95

Gln Ser Lys Thr Tyr Met Glu Val Lys Gly Thr Gly Thr Ala Asn Gln  
100 105 110



Cys Pro Thr Ile Asp Gly Gly Ser Glu Thr Phe Ser Phe Lys Ala Gly  
 115 120 125

Lys Tyr Thr Gly Lys Lys Phe Cys Phe Glu Pro Thr Ser Phe Thr Val  
 130 135 140

Lys Ala Asp Ser Val Ser Lys Asn Ala Pro Pro Asp Phe Gln Asn Thr  
 145 150 155 160

Lys Leu Met Thr Arg Leu Thr Tyr Thr Leu Asp Glu Ile Glu Gly Pro  
 165 170 175

Phe Glu Val Gly Ser Asp Gly Ser Val Lys Phe Lys Glu Glu Asp Gly  
 180 185 190

Ile Asp Tyr Ala Ala Val Thr Val Gln Leu Pro Gly Gly Glu Arg Val  
 195 200 205

Pro Phe Leu Phe Thr Val Lys Gln Leu Glu Ala Ser Gly Lys Pro Glu  
 210 215 220

Ser Phe Ser Gly Lys Phe Leu Val Pro Ser Tyr Arg Gly Ser Ser Phe  
 225 230 235 240

Leu Asp Pro Lys Gly Arg Gly Gly Ser Thr Gly Tyr Asp Asn Ala Val  
 245 250 255

Ala Leu Pro Ala Gly Gly Arg Gly Asp Glu Glu Glu Leu Ser Lys Glu  
 260 265 270

Asn Val Lys Asn Thr Ala Ala Ser Val Gly Glu Ile Thr Leu Lys Ile  
 275 280 285

Thr Lys Ser Lys Pro Glu Thr Gly Glu Val Ile Gly Val Phe Glu Ser  
 290 295 300

Leu Gln Pro Ser Asp Thr Asp Leu Gly Ala Lys Val Pro Lys Asp Val  
 305 310 315 320

Lys Ile Gln Gly Val Trp Tyr Gly Gln Ile Glu  
 325 330

<210> 2365

<211> 1062

<212> DNA

<213> Arabidopsis thaliana

<400> 2365  
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 tcagccaatc tcgacctaga cttgatttcg aatcgcttca ttgtagcggg tttcggttgt 180  
 gcaagtgga ctaacacttt tgtggcagtt caaaacataa tagatgcggt agaagaaaag 240  
 taccgtagag aaaccggaca aaaccggca gataacatcg agttccaagt cctcttcaat 300  
 gatttcagcc tcaatgattt caacactctc ttccagacac ttccaccgga aagaagatac 360  
 ttcagcgctg gagttcctgg ttcttcttc gaacgtgttc ttctaagga gagtttcac 420  
 atcgagatca tgagttacg gttccatttc acctcaaaa tccccaaagg gattatggac 480  
 cgcgactctc cttgtggaa caaagacatg cagtgcacgg ggttcaacc cgctgtcaag 540  
 aaagcgtatc ttgaccagta ctctatcgac accaaaattc ttttagatgc tagagctgaa 600  
 gagctcgtgc ccgggggggt gatgttgctt ttaggatcgt gtctaagaga cggagttaag 660  
 atgtccgaga cccctaaagg aactgtaatg gattttattg gagaatctct tagcgatctt 720  
 gctaaacagg gtgtcacagg gcaagagaag gtggacactt tcagaacctc aatttacttt 780  
 gcagaacaag gtgagataag gcaaatcatt gaggagaatg ggaagttcac aatcgaggct 840  
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 tctttcaagg ctttctatgg tgctttcatt tccgcacatt ttggagtcga agtcatgagg 960  
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<210> 2366

<211> 353

<212> PRT

<213> Arabidopsis thaliana

<400> 2366

Met Thr Thr Thr Pro Asp Trp Ile Met Ile Gly Gly Asp Gly Pro Glu  
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Ser Tyr Asn Gln Gln Ser Ser Tyr Gln Arg Ala Leu Leu Glu Ala Thr  
 20 25 30

Lys Asp Lys Met Thr Lys Ala Ile Ser Ala Asn Leu Asp Leu Asp Leu  
 35 40 45

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Ile Ser Asn Arg Phe Ile Val Ala Asp Phe Gly Cys Ala Ser Gly Pro  
50 55 60

Asn Thr Phe Val Ala Val Gln Asn Ile Ile Asp Ala Val Glu Glu Lys  
65 70 75 80

Tyr Arg Arg Glu Thr Gly Gln Asn Pro Ala Asp Asn Ile Glu Phe Gln  
85 90 95

Val Leu Phe Asn Asp Phe Ser Leu Asn Asp Phe Asn Thr Leu Phe Gln  
100 105 110

Thr Leu Pro Pro Gly Arg Arg Tyr Phe Ser Ala Gly Val Pro Gly Ser  
115 120 125

Phe Phe Glu Arg Val Leu Pro Lys Glu Ser Phe His Ile Gly Val Met  
130 135 140

Ser Tyr Ala Phe His Phe Thr Ser Lys Ile Pro Lys Gly Ile Met Asp  
145 150 155 160

Arg Asp Ser Pro Leu Trp Asn Lys Asp Met Gln Cys Thr Gly Phe Asn  
165 170 175

Pro Ala Val Lys Lys Ala Tyr Leu Asp Gln Tyr Ser Ile Asp Thr Lys  
180 185 190

Ile Leu Leu Asp Ala Arg Ala Glu Glu Leu Val Pro Gly Gly Leu Met  
195 200 205

Leu Leu Leu Gly Ser Cys Leu Arg Asp Gly Val Lys Met Ser Glu Thr  
210 215 220

Pro Lys Gly Thr Val Met Asp Phe Ile Gly Glu Ser Leu Ser Asp Leu  
225 230 235 240

Ala Lys Gln Gly Val Thr Glu Gln Glu Lys Val Asp Thr Phe Arg Thr  
245 250 255

Ser Ile Tyr Phe Ala Glu Gln Gly Glu Ile Arg Gln Ile Ile Glu Glu  
260 265 270

Asn Gly Lys Phe Thr Ile Glu Ala Phe Glu Asp Ile Ile His Ala Lys  
275 280 285

Asn Glu Phe Pro Phe Asp Pro Lys Thr Leu Ala Ile Ser Phe Lys Ala  
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290

295

Phe Tyr Gly Ala Phe Ile Ser Ala His Phe Gly Val Glu Val Met Arg  
305 310 315 320

Lys Ala Phe Glu Leu Val Glu Val Lys Ala Arg Glu Gln Ile Ser Arg  
325 330 335

Leu His Asn Ser Lys Pro Gly Met Gln Tyr Leu Ile Val Leu Arg Lys  
340 345 350

Asn

&lt;210&gt; 2367

&lt;211&gt; 921

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

<400> 2367  
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 tcgtgcgcat tgatccgtga cgaaatcgac ctgattccgg ttcagagccg agatcggacc 180  
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&lt;210&gt; 2368

&lt;211&gt; 306

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2368

Met Ala Ala Ala Ser Leu His Thr Ser Ile Ser Pro Arg Ser Phe Leu  
 1 5 10 15

Pro Leu Ser Lys Pro Ser Leu Lys Pro His Arg Ser Gln Ile Leu Leu  
 20 25 30

Arg Asn Lys Gln Arg Asn Cys Val Ser Cys Ala Leu Ile Arg Asp Glu  
 35 40 45

Ile Asp Leu Ile Pro Val Gln Ser Arg Asp Arg Thr Asp His Glu Glu  
 50 55 60

Gly Ser Val Val Val Met Ser Thr Glu Thr Ala Val Asp Gly Asn Glu  
 65 70 75 80

Ser Val Val Val Gly Phe Ser Ala Ala Thr Ser Glu Gly Gln Leu Ser  
 85 90 95

Leu Glu Gly Phe Pro Ser Ser Ser Ser Ser Gly Ala Asp Leu Gly Asp  
 100 105 110

Glu Lys Arg Arg Glu Asn Glu Glu Met Glu Lys Met Ile Asp Arg Thr  
 115 120 125

Ile Asn Ala Thr Ile Val Leu Ala Ala Gly Ser Tyr Ala Ile Thr Lys  
 130 135 140

Leu Leu Thr Ile Asp His Asp Tyr Trp His Gly Trp Thr Leu Phe Glu  
 145 150 155 160

Ile Leu Arg Tyr Ala Pro Gln His Asn Trp Ile Ala Tyr Glu Glu Ala  
 165 170 175

Leu Lys Gln Asn Pro Val Leu Ala Lys Met Val Ile Ser Gly Val Val  
 180 185 190

Tyr Ser Val Gly Asp Trp Ile Ala Gln Cys Tyr Glu Gly Lys Pro Leu  
 195 200 205

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Phe Glu Ile Asp Arg Ala Arg Thr Leu Arg Ser Gly Leu Val Gly Phe  
210 215 220

Thr Leu His Gly Ser Leu Ser His Phe Tyr Tyr Gln Phe Cys Glu Glu  
225 230 235 240

Leu Phe Pro Phe Gln Asp Trp Trp Val Val Pro Val Lys Val Ala Phe  
245 250 255

Asp Gln Thr Val Trp Ser Ala Ile Trp Asn Ser Ile Tyr Phe Thr Val  
260 265 270

Leu Gly Phe Leu Arg Phe Glu Ser Pro Ile Ser Ile Phe Lys Glu Leu  
275 280 285

Lys Ala Thr Phe Leu Pro Met Leu Thr Val Gly Ser Phe Gly His Leu  
290 295 300

Leu Ile  
305

<210> 2369

<211> 2100

<212> DNA

<213> Arabidopsis thaliana

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gatgcttttg acaagattag gtttgagtc ttgacagaca agagcaagct cgatggtcag 180  
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ggactctgca	aagtgatcaa	ggacgttttg	ggagacaagg	ttgagaaggt	tatcgtctct	1680
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atggagagga	tcatgaaagc	tcaagccttg	agagacagca	gcatgggtgg	ctacatgtcg	1800
agcaagaaga	caatggagat	taaccagag	aactccatca	tgatgagct	gagaagaga	1860
gctgatgcag	acaagaacga	caagtctgtg	aaggaccttg	tacttcttct	ctttgagacc	1920
gctcttctca	cttctgggtt	cagcctcgat	gagcccaaca	ctttcgggag	caggattcac	1980
aggatgttga	agcttggatt	gagcattgat	gacgatgatg	ttgttgaagc	cgatgctgac	2040
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<210> 2370

<211> 699

<212> PRT

<213> Arabidopsis thaliana

<400> 2370

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Leu Ser Leu Ile Ile Asn Thr Phe Tyr Ser Asn Lys Glu Ile Phe Leu  
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 Arg Glu Leu Ile Ser Asn Ser Ser Asp Ala Leu Asp Lys Ile Arg Phe  
 35 40 45  
 Glu Ser Leu Thr Asp Lys Ser Lys Leu Asp Gly Gln Pro Glu Leu Phe  
 50 55 60  
 Ile His Ile Ile Pro Asp Lys Thr Asn Asn Thr Leu Thr Ile Ile Asp  
 65 70 75 80  
 Ser Gly Ile Gly Met Thr Lys Ala Asp Leu Val Asn Asn Leu Gly Thr  
 85 90 95  
 Ile Ala Arg Ser Gly Thr Lys Glu Phe Met Glu Ala Leu Ala Ala Gly  
 100 105 110  
 Ala Asp Val Ser Met Ile Gly Gln Phe Gly Val Gly Phe Tyr Ser Ala  
 115 120 125  
 Tyr Leu Val Ala Asp Lys Val Val Val Thr Thr Lys His Asn Asp Asp  
 130 135 140  
 Glu Gln Tyr Val Trp Glu Ser Gln Ala Gly Gly Ser Phe Thr Val Thr  
 145 150 155 160  
 Arg Asp Thr Ser Gly Glu Ala Leu Gly Arg Gly Thr Lys Met Val Leu  
 165 170 175  
 Tyr Leu Lys Glu Asp Gln Met Glu Tyr Ile Glu Glu Arg Arg Leu Lys  
 180 185 190  
 Asp Leu Val Lys Lys His Ser Glu Phe Ile Ser Tyr Pro Ile Ser Leu  
 195 200 205  
 Trp Ile Glu Lys Thr Ile Glu Lys Glu Ile Ser Asp Asp Glu Glu Glu  
 210 215 220  
 Glu Glu Lys Lys Asp Glu Glu Gly Lys Val Glu Glu Val Asp Glu Glu  
 225 230 235 240  
 Lys Glu Lys Glu Glu Lys Lys Lys Lys Lys Ile Lys Glu Val Ser His  
 245 250 255  
 Glu Trp Asp Leu Val Asn Lys Gln Lys Pro Ile Trp Met Arg Lys Pro  
 260 265 270



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Glu Glu Ile Asn Lys Glu Glu Tyr Ala Ala Phe Tyr Lys Ser Leu Ser  
 275 280 285  
 Asn Asp Trp Glu Glu His Leu Ala Val Lys His Phe Ser Val Glu Gly  
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 Gln Leu Glu Phe Lys Ala Ile Leu Phe Val Pro Lys Arg Ala Pro Phe  
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 Asp Leu Phe Asp Thr Lys Lys Lys Pro Asn Asn Ile Lys Leu Tyr Val  
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 Arg Arg Val Phe Ile Met Asp Asn Cys Glu Asp Ile Ile Pro Glu Tyr  
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 Leu Gly Phe Val Lys Gly Ile Val Asp Ser Glu Asp Leu Pro Leu Asn  
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 370 375 380  
 Lys Asn Leu Val Lys Lys Cys Leu Glu Leu Phe Phe Glu Ile Ala Glu  
 385 390 395 400  
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 Lys Leu Gly Ile His Glu Asp Ser Gln Asn Arg Thr Lys Ile Ala Glu  
 420 425 430  
 Leu Leu Arg Tyr His Ser Thr Lys Ser Gly Asp Glu Leu Thr Ser Leu  
 435 440 445  
 Lys Asp Tyr Val Thr Arg Met Lys Glu Gly Gln Asn Asp Ile Phe Tyr  
 450 455 460  
 Ile Thr Gly Glu Ser Lys Lys Ala Val Glu Asn Ser Pro Phe Leu Glu  
 465 470 475 480  
 Lys Leu Lys Lys Lys Gly Ile Glu Val Leu Tyr Met Val Asp Ala Ile  
 485 490 495  
 Asp Glu Tyr Ala Ile Gly Gln Leu Lys Glu Phe Glu Gly Lys Lys Leu  
 500 505 510  
 Val Ser Ala Thr Lys Glu Gly Leu Lys Leu Asp Glu Thr Glu Asp Glu  
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515 047-E2F-PCT.ST25.txt 520 525

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Val Ile Lys Asp Val Leu Gly Asp Lys Val Glu Lys Val Ile Val Ser  
545 550 555 560

Asp Arg Val Val Asp Ser Pro Cys Cys Leu Val Thr Gly Glu Tyr Gly  
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Trp Thr Ala Asn Met Glu Arg Ile Met Lys Ala Gln Ala Leu Arg Asp  
580 585 590

Ser Ser Met Gly Gly Tyr Met Ser Ser Lys Lys Thr Met Glu Ile Asn  
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Pro Glu Asn Ser Ile Met Asp Glu Leu Arg Lys Arg Ala Asp Ala Asp  
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Lys Asn Asp Lys Ser Val Lys Asp Leu Val Leu Leu Phe Glu Thr  
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Ala Leu Leu Thr Ser Gly Phe Ser Leu Asp Glu Pro Asn Thr Phe Gly  
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Ser Arg Ile His Arg Met Leu Lys Leu Gly Leu Ser Ile Asp Asp Asp  
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<212> DNA

<213> Arabidopsis thaliana

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<211> 669

<212> PRT

<213> *Arabidopsis thaliana*

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Tyr Lys Ile Val Val Leu Asp Lys Leu Asp Tyr Cys Ser Asn Leu Lys  
35 40 45

Asn Leu Asn Pro Ser Lys His Ser Pro Asn Phe Lys Phe Val Lys Gly  
50 55 60

Asp Ile Ala Ser Ala Asp Leu Val Asn His Leu Leu Ile Thr Glu Gly  
65 70 75 80

Ile Asp Thr Ile Met His Phe Ala Ala Gln Thr His Val Asp Asn Ser  
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Phe Gly Asn Ser Phe Glu Phe Thr Lys Asn Asn Ile Tyr Gly Thr His  
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Val Leu Leu Glu Ala Cys Lys Val Thr Gly Gln Ile Arg Arg Phe Ile  
115 120 125

His Val Ser Thr Asp Glu Val Tyr Gly Glu Thr Asp Glu Asp Ala Leu  
130 135 140

Val Gly Asn His Glu Ala Ser Gln Leu Leu Pro Thr Asn Pro Tyr Ser  
145 150 155 160

Ala Thr Lys Ala Gly Ala Glu Met Leu Val Met Ala Tyr Gly Arg Ser  
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Tyr Gly Leu Pro Val Ile Thr Thr Arg Gly Asn Asn Val Tyr Gly Pro  
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Asn Gln Phe Pro Glu Lys Leu Ile Pro Lys Phe Ile Leu Leu Ala Met  
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047-E2F-PCT.ST25.txt

Arg Gly Gln Val Leu Pro Ile His Gly Asp Gly Ser Asn Val Arg Ser  
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Tyr Leu Tyr Cys Glu Asp Val Ala Glu Ala Phe Glu Val Val Leu His  
225 230 235 240

Lys Gly Glu Val Gly His Val Tyr Asn Ile Gly Thr Lys Lys Glu Arg  
245 250 255

Arg Val Asn Asp Val Ala Lys Asp Ile Cys Lys Leu Phe Asn Met Asp  
260 265 270

Pro Glu Ala Asn Ile Lys Phe Val Asp Asn Arg Pro Phe Asn Asp Gln  
275 280 285

Arg Tyr Phe Leu Asp Asp Gln Lys Leu Lys Lys Leu Gly Trp Ser Glu  
290 295 300

Arg Thr Thr Trp Glu Glu Gly Leu Lys Lys Thr Met Asp Trp Tyr Thr  
305 310 315 320

Gln Asn Pro Glu Trp Trp Gly Asp Val Ser Gly Ala Leu Leu Pro His  
325 330 335

Pro Arg Met Leu Met Met Pro Gly Gly Arg His Phe Asp Gly Ser Glu  
340 345 350

Asp Asn Ser Leu Ala Ala Thr Leu Ser Glu Lys Pro Ser Gln Thr His  
355 360 365

Met Val Val Pro Ser Gln Arg Ser Asn Gly Thr Pro Gln Lys Pro Ser  
370 375 380

Leu Lys Phe Leu Ile Tyr Gly Lys Thr Gly Trp Ile Gly Gly Leu Leu  
385 390 395 400

Gly Lys Ile Cys Asp Lys Gln Gly Ile Ala Tyr Glu Tyr Gly Lys Gly  
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Arg Leu Glu Asp Arg Ser Ser Leu Leu Gln Asp Ile Gln Ser Val Lys  
420 425 430

Pro Thr His Val Phe Asn Ser Ala Gly Val Thr Gly Arg Pro Asn Val  
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Asp Trp Cys Glu Ser His Lys Thr Glu Thr Ile Arg Ala Asn Val Ala  
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450

455

Gly Thr Leu Thr Leu Ala Asp Val Cys Arg Glu His Gly Leu Leu Met  
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Met Asn Phe Ala Thr Gly Cys Ile Phe Glu Tyr Asp Asp Lys His Pro  
485 490 495

Glu Gly Ser Gly Ile Gly Phe Lys Glu Glu Asp Thr Pro Asn Phe Thr  
500 505 510

Gly Ser Phe Tyr Ser Lys Thr Lys Ala Met Val Glu Glu Leu Leu Lys  
515 520 525

Glu Tyr Asp Asn Val Cys Thr Leu Arg Val Arg Met Pro Ile Ser Ser  
530 535 540

Asp Leu Asn Asn Pro Arg Asn Phe Ile Thr Lys Ile Ser Arg Tyr Asn  
545 550 555 560

Lys Val Val Asn Ile Pro Asn Ser Met Thr Val Leu Asp Glu Leu Leu  
565 570 575

Pro Ile Ser Ile Glu Met Ala Lys Arg Asn Leu Lys Gly Ile Trp Asn  
580 585 590

Phe Thr Asn Pro Gly Val Val Ser His Asn Glu Ile Leu Glu Met Tyr  
595 600 605

Arg Asp Tyr Ile Asn Pro Glu Phe Lys Trp Ala Asn Phe Thr Leu Glu  
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Glu Gln Ala Lys Val Ile Val Ala Pro Arg Ser Asn Asn Glu Met Asp  
625 630 635 640

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<210> 2373

<211> 1446

<212> DNA

<213> Arabidopsis thaliana

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<210> 2374

<211> 481

<212> PRT

<213> Arabidopsis thaliana

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 Thr Leu Asp Ser Arg Arg Phe Ser Leu His Val Ala Ser Lys Val Glu  
 50 55 60  
 Ser Val Arg Gly Lys Gly Ser Arg Gly Val Val Ser Met Ala Lys Lys  
 65 70 75 80  
 Ser Val Gly Asp Leu Thr Ser Ala Asp Leu Lys Gly Lys Lys Val Phe  
 85 90 95  
 Val Arg Ala Asp Leu Asn Val Pro Leu Asp Asp Asn Gln Thr Ile Thr  
 100 105 110  
 Asp Asp Thr Arg Ile Arg Ala Ala Ile Pro Thr Ile Lys Tyr Leu Ile  
 115 120 125  
 Glu Asn Gly Ala Lys Val Ile Leu Ser Thr His Leu Gly Arg Pro Lys  
 130 135 140  
 Gly Val Thr Pro Lys Phe Ser Leu Ala Pro Leu Val Pro Arg Leu Ser  
 145 150 155 160  
 Glu Leu Leu Gly Ile Glu Val Thr Lys Ala Asp Asp Cys Ile Gly Pro  
 165 170 175  
 Glu Val Glu Ser Leu Val Ala Ser Leu Pro Glu Gly Gly Val Leu Leu  
 180 185 190  
 Leu Glu Asn Val Arg Phe Tyr Lys Glu Glu Glu Lys Asn Asp Pro Glu  
 195 200 205  
 Phe Ala Lys Lys Leu Ala Ser Leu Ala Asp Leu Tyr Val Asn Asp Ala  
 210 215 220  
 Phe Gly Thr Ala His Arg Ala His Ala Ser Thr Glu Gly Val Thr Lys  
 225 230 235 240



Phe Leu Lys Pro Ser Val Ala Gly Phe Leu Leu Gln Lys Glu Leu Asp  
 245 250 255  
 Tyr Leu Val Gly Ala Val Ser Asn Pro Lys Arg Pro Phe Ala Ala Ile  
 260 265 270  
 Val Gly Gly Ser Lys Val Ser Ser Lys Ile Gly Val Ile Glu Ser Leu  
 275 280 285  
 Leu Glu Lys Cys Asp Ile Leu Leu Leu Gly Gly Gly Met Ile Phe Thr  
 290 295 300  
 Phe Tyr Lys Ala Gln Gly Leu Ser Val Gly Ser Ser Leu Val Glu Glu  
 305 310 315 320  
 Asp Lys Leu Glu Leu Ala Thr Glu Leu Leu Ala Lys Ala Lys Ala Lys  
 325 330 335  
 Gly Val Ser Leu Leu Leu Pro Thr Asp Val Val Val Ala Asp Lys Phe  
 340 345 350  
 Ala Pro Asp Ala Asn Ser Lys Ile Val Pro Ala Ser Gly Ile Glu Asp  
 355 360 365  
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 Lys Leu Ala Glu Leu Ser Glu Lys Gly Val Thr Thr Ile Ile Gly Gly  
 420 425 430  
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&lt;211&gt; 1413

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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&lt;210&gt; 2376

&lt;211&gt; 470

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2376

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35 40 45Val Val Val Gly Asp Glu His Gly Lys Lys Thr Glu Leu Gly Val Glu  
50 55 60Glu Phe Glu Ile Asp Ala Asp Asp Tyr Ile Val Tyr Val Glu Gly Tyr  
65 70 75 80Arg Glu Lys Val Asn Asp Met Thr Ser Glu Met Ile Thr Phe Leu Ser  
85 90 95Ile Lys Thr Phe Lys Gly Lys Thr Ser His Pro Ile Glu Lys Arg Pro  
100 105 110Gly Val Lys Phe Val Leu His Gly Gly Lys Ile Val Gly Phe His Gly  
115 120 125Arg Ser Thr Asp Val Leu His Ser Leu Gly Ala Tyr Val Ser Leu Ser  
130 135 140Ser Thr Ile Lys Leu Leu Gly Lys Trp Ile Lys Val Glu Gln Lys Gly  
145 150 155 160Glu Gly Pro Gly Leu Arg Cys Ser His Gly Ile Ala Gln Val Gly Asn  
165 170 175Lys Ile Tyr Ser Phe Gly Gly Glu Phe Thr Pro Asn Gln Pro Ile Asp  
180 185 190Lys His Leu Tyr Val Phe Asp Leu Glu Thr Arg Thr Trp Ser Ile Ser  
195 200 205Pro Ala Thr Gly Asp Val Pro His Leu Ser Cys Leu Gly Val Arg Met  
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210

215

Val Ser Val Gly Ser Thr Leu Tyr Val Phe Gly Gly Arg Asp Ala Ser  
 225 230 235 240  
 Arg Gln Tyr Asn Gly Phe Tyr Ser Phe Asp Thr Thr Thr Asn Glu Trp  
 245 250 255  
 Lys Leu Leu Thr Pro Val Glu Glu Gly Pro Thr Pro Arg Ser Phe His  
 260 265 270  
 Ser Met Ala Ala Asp Glu Glu Asn Val Tyr Val Phe Gly Gly Val Ser  
 275 280 285  
 Ala Thr Ala Arg Leu Asn Thr Leu Asp Ser Tyr Asn Ile Val Asp Lys  
 290 295 300  
 Lys Trp Phe His Cys Ser Thr Pro Gly Asp Ser Leu Thr Ala Arg Gly  
 305 310 315 320  
 Gly Ala Gly Leu Glu Val Val Gln Gly Lys Val Trp Val Val Tyr Gly  
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 Phe Asn Gly Cys Glu Val Asp Asp Val His Tyr Tyr Asp Pro Val Gln  
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 Asp Lys Trp Thr Gln Val Glu Thr Phe Gly Val Arg Pro Ser Glu Arg  
 355 360 365  
 Ser Val Phe Ala Ser Ala Ala Ile Gly Lys His Ile Val Ile Phe Gly  
 370 375 380  
 Gly Glu Ile Ala Met Asp Pro Leu Ala His Val Gly Pro Gly Gln Leu  
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 Thr Asp Gly Thr Phe Ala Leu Asp Thr Glu Thr Leu Gln Trp Glu Arg  
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 420 425 430  
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<213> Arabidopsis thaliana

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<211> 131

<212> PRT

<213> Arabidopsis thaliana

<400> 2378

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20     25
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Trp Ala Gln Ser Ser Ala Phe Pro Gln Leu Lys Pro Ala Glu Ile Ala
35     40     45
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Gly Ile Asn Lys Asp Phe Glu Glu Ala Gly His Leu Ala Pro Thr Gly
50     55     60
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Leu Phe Leu Gly Gly Glu Lys Tyr Met Val Val Gln Gly Glu Ala Gly
65     70     75     80
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Ala Val Ile Arg Gly Lys Lys Gly Pro Gly Gly Val Thr Ile Lys Lys
Page 3391
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Thr Thr Gln Ala Leu Val Phe Gly Ile Tyr Asp Glu Pro Met Thr Gly  
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Gly Gln Cys Asn Leu Val Val Glu Arg Leu Gly Asp Tyr Leu Ile Glu  
115 120 125

Ser Gly Leu  
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<211> 1326

<212> DNA

<213> Arabidopsis thaliana

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<210> 2380

<211> 441

<212> PRT

<213> Arabidopsis thaliana

<400> 2380

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Asp Tyr Leu Glu Ser Leu Gly Ala Lys Ile Pro Thr Gly Val His Glu  
 35 40 45

Glu Asp Lys Asp Thr Lys Pro Arg Ser Phe Val Val Glu Glu Ser Asp  
 50 55 60

Asp Asp Met Asp Glu Thr Glu Glu Val Lys Pro Lys Val Glu Glu Glu  
 65 70 75 80

Glu Glu Glu Asp Glu Ile Val Glu Ser Asp Val Glu Leu Glu Gly Asp  
 85 90 95

Thr Val Glu Pro Asp Asn Asp Pro Pro Gln Lys Met Gly Asp Ser Ser  
 100 105 110

Val Glu Val Thr Asp Glu Asn Arg Glu Ala Ala Gln Glu Ala Lys Gly  
 115 120 125

Lys Ala Met Glu Ala Leu Ser Glu Gly Asn Phe Asp Glu Ala Ile Glu  
 130 135 140

His Leu Thr Arg Ala Ile Thr Leu Asn Pro Thr Ser Ala Ile Met Tyr  
 145 150 155 160

Gly Asn Arg Ala Ser Val Tyr Ile Lys Leu Lys Lys Pro Asn Ala Ala  
 Page 3393

Ile Arg Asp Ala Asn Ala Ala Leu Glu Ile Asn Pro Asp Ser Ala Lys  
180 185

Gly Tyr Lys Ser Arg Gly Met Ala Arg Ala Met Leu Gly Glu Trp Ala  
195 200 205

Glu Ala Ala Lys Asp Leu His Leu Ala Ser Thr Ile Asp Tyr Asp Glu  
210 215 220

Glu Ile Ser Ala Val Leu Lys Lys Val Glu Pro Asn Ala His Lys Leu  
225 230 235 240

Glu Glu His Arg Arg Lys Tyr Asp Arg Leu Arg Lys Glu Arg Glu Asp  
245 250 255

Lys Lys Ala Glu Arg Asp Arg Leu Arg Arg Arg Ala Glu Ala Gln Ala  
260 265 270

Ala Tyr Asp Lys Ala Lys Lys Glu Glu Gln Ser Ser Ser Ser Arg Pro  
275 280 285

Ser Gly Gly Gly Phe Pro Gly Gly Met Pro Gly Gly Phe Pro Gly Gly  
290 295 300

Met Pro Gly Gly Phe Pro Gly Gly Met Gly Gly Met Pro Gly Gly Phe  
305 310 315 320

Pro Gly Gly Met Gly Gly Met Gly Gly Met Pro Gly Gly Phe Pro Gly  
325 330 335

Gly Met Gly Gly Gly Met Pro Ala Gly Met Gly Gly Gly Met Pro Gly  
340 345 350

Met Gly Gly Gly Met Pro Ala Gly Met Gly Gly Gly Gly Met Pro Gly  
355 360 365

Ala Gly Gly Gly Met Pro Gly Gly Gly Gly Met Pro Gly Gly Met Asp  
370 375 380

Phe Ser Lys Ile Leu Asn Asp Pro Glu Leu Met Thr Ala Phe Ser Asp  
385 390 395 400

Pro Glu Val Met Ala Ala Leu Gln Asp Val Met Lys Asn Pro Ala Asn  
405 410 415



Leu Ala Lys His Gln Ala Asn Pro Lys Val Ala Pro Val Ile Ala Lys  
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Met Met Gly Lys Phe Ala Gly Pro Gln  
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<210> 2381

<211> 948

<212> DNA

<213> *Arabidopsis thaliana*

<400> 2381

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atcgttgctt tgaagaagac gcgtctccat gaggatgaag aaggtgttcc tccactact	180
cttcgcgaga tctctatctt gcgtatgctc gctcgtgatc ctacatcgt taggttgatg	240
gatgttaagc aaggaataaa caaagaagga aaaactgtac ttaccttgt ttctgagtat	300
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caaatactg tcaagtgtt gatgtaccag ttatgcaaag gcatggcttt ttgccatggt	420
catggagtgt tgcacaggga tcttaagcct cacaatctct tgatggaccg gaagacaatg	480
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tactctactg gagtggatat gtggtctgtt ggctgtattt ttgctgaact agtgaccaag	660
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<211> 315

<212> PRF

<213> *Arabidopsis thaliana*

<400> 2382

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20 25 30

Ala Arg Glu Lys Ala Thr Gly Met Ile Val Ala Leu Lys Lys Thr Arg  
35 40 45

Leu His Glu Asp Glu Glu Gly Val Pro Pro Thr Thr Leu Arg Glu Ile  
50 55 60

Ser Ile Leu Arg Met Leu Ala Arg Asp Pro His Ile Val Arg Leu Met  
65 70 75 80

Asp Val Lys Gln Gly Ile Asn Lys Glu Gly Lys Thr Val Leu Tyr Leu  
85 90 95

Val Phe Glu Tyr Val Asp Thr Asp Leu Lys Lys Phe Ile Arg Ser Phe  
100 105 110

Arg Gln Ala Gly Gln Asn Ile Pro Gln Asn Thr Val Lys Cys Leu Met  
115 120 125

Tyr Gln Leu Cys Lys Gly Met Ala Phe Cys His Gly His Gly Val Leu  
130 135 140

His Arg Asp Leu Lys Pro His Asn Leu Leu Met Asp Arg Lys Thr Met  
145 150 155 160

Thr Leu Lys Ile Ala Asp Leu Gly Leu Ala Arg Ala Phe Thr Leu Pro  
165 170 175

Met Lys Lys Tyr Thr His Glu Ile Leu Thr Leu Trp Tyr Arg Ala Pro  
180 185 190

Glu Val Leu Leu Gly Ala Thr His Tyr Ser Thr Gly Val Asp Met Trp  
195 200 205

Ser Val Gly Cys Ile Phe Ala Glu Leu Val Thr Lys Gln Ala Ile Phe  
210 215 220

Ala Gly Asp Ser Glu Leu Gln Gln Leu Leu Arg Ile Phe Arg Leu Leu  
225 230 235 240

Gly Thr Pro Asn Glu Glu Val Trp Pro Gly Val Ser Lys Leu Lys Asp  
245 250 255

047-E2F-PCT.ST25.txt

Trp His Glu Tyr Pro Gln Trp Lys Pro Leu Ser Leu Ser Thr Ala Val  
260 265 270

Pro Asn Leu Asp Glu Ala Gly Leu Asp Leu Leu Ser Lys Met Leu Glu  
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Tyr Glu Pro Ala Lys Arg Ile Ser Ala Lys Lys Ala Met Glu His Pro  
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<213> Arabidopsis thaliana

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ttattcactt tgagcctcgg ttactcctt ctgggaccgg tttttgcata tgtggttcct 360  
gaagattaca cttgggaagt agtgattcag gttcttgtgg ctctactctc tgttcttggt 420  
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<210> 2384

<211> 158

<212> PRT

<213> Arabidopsis thaliana

<400> 2384

Met Ala Ala Lys Leu Ile Cys Ser Ser Leu Thr Val His Ser Met Ala  
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Asn Lys Lys Pro Ser Pro Ser Ala Ala Thr Arg Thr Ile Thr Ser Lys  
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Lys Ser Thr Ala Thr Pro Gln Val Lys Leu Leu Thr Arg Val Glu Gln  
35 40 45

Leu Lys Leu Leu Thr Lys Ala Glu Lys Ala Gly Leu Leu Ser Leu Ala  
50 55 60

Glu Lys Ser Gly Phe Ser Leu Ser Thr Ile Glu Arg Leu Gly Leu Leu  
65 70 75 80

Thr Lys Ala Glu Glu Phe Gly Val Leu Ser Ala Ala Thr Asn Pro Glu  
85 90 95

Thr Pro Gly Thr Leu Phe Thr Leu Ser Leu Gly Leu Leu Leu Gly  
100 105 110

Pro Val Phe Ala Tyr Val Val Pro Glu Asp Tyr Thr Trp Glu Val Val  
115 120 125

Ile Gln Val Leu Val Ala Leu Leu Ser Val Leu Gly Gly Ser Ala Ala  
130 135 140

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145 150 155

<210> 2385

<211> 255

<212> DNA

<213> Arabidopsis thaliana

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ggatgcttca acataaccac tgtgttcagc cattctcaaa ctgttggtgt atgtggaaac 180  
tgtcagacag ttctgtgccg gccaccgggt ggtaaagcga ggctacaaga gggatgctct 240  
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<210> 2386

<211> 84

<212> PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2386

Met Val Leu Gln Asn Asp Ile Asp Leu Leu His Pro Pro Pro Glu Leu  
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20 25 30Phe Phe Met Asp Val Lys Cys Gln Gly Cys Phe Asn Ile Thr Thr Val  
35 40 45Phe Ser His Ser Gln Thr Val Val Val Cys Gly Asn Cys Gln Thr Val  
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65 70 75 80

Phe Arg Lys Lys

&lt;210&gt; 2387

&lt;211&gt; 495

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2387

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agggcaaatg ctacgcagcc taagctcttt gttgggatga ttcttatcct tattttcgca	420
gaagcgcttg ctctttacgg gcttattgta ggaatcattc ttctctcacg agctggccag	480
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&lt;210&gt; 2388

&lt;211&gt; 164

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2388

Met Ser Thr Phe Ser Gly Asp Glu Thr Ala Pro Phe Phe Gly Phe Leu  
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Gly Ala Ala Ala Leu Val Phe Ser Cys Met Gly Ala Ala Tyr Gly  
 20 25 30

Thr Ala Lys Ser Gly Val Gly Val Ala Ser Met Gly Val Met Arg Pro  
 35 40 45

Glu Leu Val Met Lys Ser Ile Val Pro Val Val Met Ala Gly Val Leu  
 50 55 60

Gly Ile Tyr Gly Leu Ile Ile Ala Val Ile Ile Ser Thr Gly Ile Asn  
 65 70 75 80

Pro Lys Ala Lys Ser Tyr Tyr Leu Phe Asp Gly Tyr Ala His Leu Ser  
 85 90 95

Ser Gly Leu Ala Cys Gly Leu Ala Gly Leu Ser Ala Gly Met Ala Ile  
 100 105 110

Gly Ile Val Gly Asp Ala Gly Val Arg Ala Asn Ala Gln Gln Pro Lys  
 115 120 125

Leu Phe Val Gly Met Ile Leu Ile Leu Ile Phe Ala Glu Ala Leu Ala  
 130 135 140

Leu Tyr Gly Leu Ile Val Gly Ile Ile Leu Ser Ser Arg Ala Gly Gln  
 145 150 155 160

Ser Arg Ala Glu

&lt;210&gt; 2389

&lt;211&gt; 768

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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<210> 2390

<211> 255

<212> PRT

<213> *Arabidopsis thaliana*

<400> 2390

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          20          25          30

Gly His Met Gly Pro Trp Ile Asn Ala His Ala Thr Phe Tyr Gly Gly
 35          40          45

Gly Asp Ala Ser Gly Thr Met Gly Gly Ala Cys Gly Tyr Gly Asn Leu
 50          55          60

Tyr Ser Gln Gly Tyr Gly Leu Glu Thr Ala Ala Leu Ser Thr Ala Leu
 65          70          75          80

Phe Asp Gln Gly Leu Ser Cys Gly Ala Cys Phe Glu Leu Met Cys Val
 85          90          95

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Asn Asp Pro Gln Trp Cys Ile Lys Gly Arg Ser Ile Val Thr Ala  
100 105 110

Thr Asn Phe Cys Pro Pro Gly Gly Ala Cys Asp Pro Pro Asn His His  
115 120 125

Phe Asp Leu Ser Gln Pro Ile Tyr Glu Lys Ile Ala Leu Tyr Lys Ser  
130 135 140

Gly Ile Ile Pro Val Met Tyr Arg Arg Val Arg Cys Lys Arg Ser Gly  
145 150 155 160

Gly Ile Arg Phe Thr Ile Asn Gly His Ser Tyr Phe Asn Leu Val Leu  
165 170 175

Val Thr Asn Val Gly Gly Ala Gly Asp Val His Ser Val Ser Met Lys  
180 185 190

Gly Ser Arg Thr Lys Trp Gln Leu Met Ser Arg Asn Trp Gly Gln Asn  
195 200 205

Trp Gln Ser Asn Ser Tyr Leu Asn Gly Gln Ser Leu Ser Phe Val Val  
210 215 220

Thr Thr Ser Asp Arg Arg Ser Val Val Ser Phe Asn Val Ala Pro Pro  
225 230 235 240

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245 250 255

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<211> 594

<212> DNA

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cacattagag cttcaggtgg attcagaaat gcatttacta aagccaatgg tatctccaac	540
accgtcggga tcatctgtct cgtcgtcttc cccgtctggg ctcttatctt ttaa	594

&lt;210&gt; 2392

&lt;211&gt; 197

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2392

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Thr	His	Ala	Phe	Thr	Leu	Thr	Gly	Leu	Gly	Phe	Gly	Thr	Ser	Val	Leu
		35					40					45			

Glu	Trp	Val	Ala	Ser	Ile	Ala	Ala	Ile	Tyr	Leu	Leu	Val	Leu	Asp	Arg
	50					55					60				

Thr	Asn	Trp	Lys	Thr	Asn	Met	Leu	Thr	Ser	Leu	Leu	Ile	Pro	Tyr	Ile
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Phe	Phe	Ser	Leu	Pro	Ser	Leu	Ile	Phe	Gly	Ile	Phe	Arg	Gly	Glu	Ile
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Gly	Lys	Trp	Ile	Ala	Phe	Val	Ala	Val	Val	Gln	Leu	Phe	Phe	Pro	
			100					105					110		

Lys	His	Ala	Arg	Glu	Tyr	Leu	Glu	Leu	Pro	Val	Ala	Leu	Val	Leu	Leu
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Ala	Val	Val	Ala	Pro	Asn	Leu	Ile	Ala	Gly	Thr	Phe	Arg	Asp	Ser	Trp
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Ile	Gly	Leu	Ala	Ile	Cys	Leu	Gly	Ile	Gly	Cys	Tyr	Leu	Leu	Gln	Glu
145					150					155					160

His	Ile	Arg	Ala	Ser	Gly	Gly	Phe	Arg	Asn	Ala	Phe	Thr	Lys	Ala	Asn

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Trp Ala Leu Ile Phe  
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<213> Arabidopsis thaliana

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<211> 462

<212> PRT

<213> Arabidopsis thaliana

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35 40 45

Thr Thr Ser Thr Thr Val Arg Phe Ser Leu Asn Glu Ile Pro Pro Phe  
50 55 60

His Gly Leu Asp Ser Ser Val Asp Ile Gly Ala Ile Phe Thr Arg Ala  
65 70 75 80

Glu Ser Leu Leu Tyr Thr Ile Ala Asp Ala Ala Val Val Gly Ala Asp  
85 90 95

Ser Val Val Thr Thr Asp Ser Ser Ala Val Gln Lys Ser Gly Gly Trp  
100 105 110

Phe Gly Phe Ile Ser Asp Ala Met Glu Leu Val Leu Lys Ile Leu Lys  
115 120 125

Asp Gly Leu Ser Ala Val His Val Pro Tyr Ala Tyr Gly Phe Ala Ile  
130 135 140

Ile Leu Leu Thr Ile Ile Val Lys Ala Ala Thr Tyr Pro Leu Thr Lys  
145 150 155 160

Gln Gln Val Glu Ser Thr Leu Ala Met Gln Asn Leu Gln Pro Lys Ile  
165 170 175

047-E2F-PCT.ST25.txt

Lys Ala Ile Gln Gln Arg Tyr Ala Gly Asn Gln Glu Arg Ile Gln Leu  
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 195 200 205  
 Cys Leu Pro Thr Leu Ala Thr Ile Pro Val Trp Ile Gly Leu Tyr Gln  
 210 215 220  
 Ala Leu Ser Asn Val Ala Asn Glu Gly Leu Phe Thr Glu Gly Phe Phe  
 225 230 235 240  
 Trp Ile Pro Ser Leu Gly Gly Pro Thr Ser Ile Ala Ala Arg Gln Ser  
 245 250 255  
 Gly Ser Gly Ile Ser Trp Leu Phe Pro Phe Val Asp Gly His Pro Pro  
 260 265 270  
 Leu Gly Trp Tyr Asp Thr Val Ala Tyr Leu Val Leu Pro Val Leu Leu  
 275 280 285  
 Ile Ala Ser Gln Tyr Val Ser Met Glu Ile Met Lys Pro Pro Gln Thr  
 290 295 300  
 Asp Asp Pro Ala Gln Lys Asn Thr Leu Leu Val Phe Lys Phe Leu Pro  
 305 310 315 320  
 Leu Met Ile Gly Tyr Phe Ala Leu Ser Val Pro Ser Gly Leu Ser Ile  
 325 330 335  
 Tyr Trp Leu Thr Asn Asn Val Leu Ser Thr Ala Gln Gln Val Tyr Leu  
 340 345 350  
 Arg Lys Leu Gly Gly Ala Lys Pro Asn Met Asp Glu Asn Ala Ser Lys  
 355 360 365  
 Ile Ile Ser Ala Gly Arg Ala Lys Arg Ser Ile Ala Gln Pro Asp Asp  
 370 375 380  
 Ala Gly Glu Arg Phe Arg Gln Leu Lys Glu Gln Glu Lys Arg Ser Lys  
 385 390 395 400  
 Lys Asn Lys Ala Val Ala Lys Asp Thr Val Glu Leu Val Glu Glu Ser  
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 420 425 430

047-E2F-PCT.ST25.txt

Glu Gly Ala Leu Ala Ser Ser Thr Thr Ser Lys Pro Leu Pro Glu Val  
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<210> 2395

<211> 828

<212> DNA

<213> Arabidopsis thaliana

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<400> 2395
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gagcttgtgg cacttgcagc caacaagaa ctcaacttta cttacacacc aaagcctgta    720
ccagttgaga aagaagcagc cactcctgat tcaaacccaa gtctccctgt tctcttctct    780
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<210> 2396

<211> 275

<212> PRT

<213> Arabidopsis thaliana

<400> 2396

Met Thr Glu Val Ile Ser Lys Thr Ser Leu Phe Leu Gly Ala Cys Gly  
Page 3407

1 5 15

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20 25 30

Gly Phe Gly Leu Lys Lys Ser Phe Ser Cys Leu Lys Leu Lys Ser Gln  
35 40 45

Lys Pro Leu Arg Ser Val Phe Tyr Gly Lys Gln Ile Val Phe Gly Asp  
50 55 60

Ser Gln Asp Glu Ser Phe Arg Arg Ser Ser Ala Ile Thr Ala Gln Thr  
65 70 75 80

Thr Leu Arg Ile Gly Thr Ala Gln Lys Trp Trp Glu Lys Gly Leu Lys  
85 90 95

Asp Asn Met Arg Glu Ile Ser Ser Ala Gln Glu Leu Val Asp Ser Leu  
100 105 110

Thr Asn Ala Gly Asp Lys Leu Val Val Val Asp Phe Phe Ser Pro Gly  
115 120 125

Cys Gly Gly Cys Lys Ala Leu His Pro Lys Ile Cys Gln Phe Ala Glu  
130 135 140

Met Asn Pro Asp Val Gln Phe Leu Gln Val Asn Tyr Glu Glu His Lys  
145 150 155 160

Ser Met Cys Tyr Ser Leu Gly Val His Val Leu Pro Phe Phe Arg Phe  
165 170 175

Tyr Arg Gly Ser Gln Gly Arg Val Cys Ser Phe Ser Cys Thr Asn Ala  
180 185 190

Thr Ile Lys Lys Phe Arg Asp Ala Leu Ala Lys His Gly Pro Asp Arg  
195 200 205

Cys Ser Leu Gly Pro Thr Lys Gly Leu Glu Glu Lys Glu Leu Val Ala  
210 215 220

Leu Ala Ala Asn Lys Glu Leu Asn Phe Thr Tyr Thr Pro Lys Pro Val  
225 230 235 240

Pro Val Glu Lys Glu Ala Ala Thr Pro Asp Ser Asn Pro Ser Leu Pro  
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Val Pro Leu Pro Ser Met Ser Ser Asn Asp Glu Lys Thr Leu Val Ser  
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<211> 423

<212> DNA

<213> Arabidopsis thaliana

<400> 2397

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ttgaacgtgg taggatttgg gctgatcgga tggctagctc cgctgagcat tccagcgata	240
aatgggaaga gcctgacggg tctcttcttc gatagcatcg gaactgagct cgctcacttc	300
ccgactcctc cagctctcac ttcacagttc tggttgtggt tggttacgtg gcacttaggc	360
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<210> 2398

<211> 140

<212> PRT

<213> Arabidopsis thaliana

<400> 2398

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20 25 30	
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35 40 45	
Val Thr Cys Phe Glu Arg Asn Trp Leu Arg Arg Asp Leu Asn Val Val	
50 55 60	

047-E2F-PCT.ST25.txt

Gly Phe Gly Leu Ile Gly Trp Leu Ala Pro Ser Ser Ile Pro Ala Ile  
65 70 75 80

Asn Gly Lys Ser Leu Thr Gly Leu Phe Phe Asp Ser Ile Gly Thr Glu  
85 90 95

Leu Ala His Phe Pro Thr Pro Pro Ala Leu Thr Ser Gln Phe Trp Leu  
100 105 110

Trp Leu Val Thr Trp His Leu Gly Leu Phe Leu Cys Leu Thr Phe Gly  
115 120 125

Gln Ile Gly Phe Lys Gly Arg Thr Glu Asp Tyr Phe  
130 135 140

<210> 2399

<211> 1533

<212> DNA

<213> Arabidopsis thaliana

<400> 2399  
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caacaagtaa ccgacacggt tcaagcaaag gaggatgtag ttaatgcggt ggagccacaa 180  
cgttacgacg gtttggtctc gacgaaagag ggagagaagc cgagagtttt ggttctcggg 240  
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gaacccggtt cttattactt ctttgcta atgtcctcaac ttgatgctga taatcatgag 480  
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gcttatgaca aactgtgact agcttggtgt gcagaagcat ccacatttgg aattaatggc 600  
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ggaggacggg ccaatagcgc aaaggaaatg gagcttgggg aaccatttgt gtataaacat	1320
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gaagggaaa gaaatataat ggcaggtttt ctgagctggt tcatatggag gtctgcttat	1440
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<210> 2400

<211> 510

<212> PRT

<213> Arabidopsis thaliana

<400> 2400

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Ser	Val	Gly	Asn	Val	Phe	Arg	Asn	Pro	Glu	Ser	Tyr	Thr	Leu	Ser	Ser
		20						25					30		

Arg	Phe	Cys	Thr	Ala	Leu	Gln	Lys	Gln	Gln	Val	Thr	Asp	Thr	Val	Gln
		35					40					45			

Ala	Lys	Glu	Asp	Val	Val	Asn	Ala	Leu	Glu	Pro	Gln	Arg	Tyr	Asp	Gly
	50					55					60				

Leu	Ala	Pro	Thr	Lys	Glu	Gly	Glu	Lys	Pro	Arg	Val	Leu	Val	Leu	Gly
65				70					75					80	

Ser	Gly	Trp	Ala	Gly	Cys	Arg	Val	Leu	Lys	Gly	Ile	Asp	Thr	Ser	Ile
				85					90					95	

Tyr	Asp	Val	Val	Cys	Val	Ser	Pro	Arg	Asn	His	Met	Val	Phe	Thr	Pro
			100					105					110		

Leu	Leu	Ala	Ser	Thr	Cys	Val	Gly	Thr	Leu	Glu	Phe	Arg	Ser	Val	Ala

115

120

125

Glu Pro Ile Ser Arg Ile Gln Pro Ala Ile Ser Arg Glu Pro Gly Ser  
130 135 140

Tyr Tyr Phe Leu Ala Asn Cys Ser Lys Leu Asp Ala Asp Asn His Glu  
145 150 155 160

Val His Cys Glu Thr Val Thr Glu Gly Ser Ser Thr Leu Lys Pro Trp  
165 170 175

Lys Phe Lys Ile Ala Tyr Asp Lys Leu Val Leu Ala Cys Gly Ala Glu  
180 185 190

Ala Ser Thr Phe Gly Ile Asn Gly Val Leu Glu Asn Ala Ile Phe Leu  
195 200 205

Arg Glu Val His His Ala Gln Glu Ile Arg Arg Lys Leu Leu Leu Asn  
210 215 220

Leu Met Leu Ser Glu Val Pro Gly Ile Gly Glu Asp Glu Lys Lys Arg  
225 230 235 240

Leu Leu His Cys Val Val Val Gly Gly Gly Pro Thr Gly Val Glu Phe  
245 250 255

Ser Gly Glu Leu Ser Asp Phe Ile Met Lys Asp Val Arg Gln Arg Tyr  
260 265 270

Ser His Val Lys Asp Asp Ile Arg Val Thr Leu Ile Glu Ala Arg Asp  
275 280 285

Ile Leu Ser Ser Phe Asp Asp Arg Leu Arg His Tyr Ala Ile Lys Gln  
290 295 300

Leu Asn Lys Ser Gly Val Lys Leu Val Arg Gly Ile Val Lys Glu Val  
305 310 315 320

Lys Pro Gln Lys Leu Ile Leu Asp Asp Gly Thr Glu Val Pro Tyr Gly  
325 330 335

Pro Leu Val Trp Ser Thr Gly Val Gly Pro Ser Ser Phe Val Arg Ser  
340 345 350

Leu Asp Phe Pro Lys Asp Pro Gly Gly Arg Ile Gly Ile Asp Glu Trp  
355 360 365

Met Arg Val Pro Ser Val Gln Asp Val Phe Ala Ile Gly Asp Cys Ser  
 370 375 380

Gly Tyr Leu Glu Ser Thr Gly Lys Ser Thr Leu Pro Ala Leu Ala Gln  
 385 390 395 400

Val Ala Glu Arg Glu Gly Lys Tyr Leu Ala Asn Leu Phe Asn Val Met  
 405 410 415

Gly Lys Ala Gly Gly Gly Arg Ala Asn Ser Ala Lys Glu Met Glu Leu  
 420 425 430

Gly Glu Pro Phe Val Tyr Lys His Leu Gly Ser Met Ala Thr Ile Gly  
 435 440 445

Arg Tyr Lys Ala Leu Val Asp Leu Arg Glu Ser Lys Glu Gly Lys Gly  
 450 455 460

Ile Ser Met Ala Gly Phe Leu Ser Trp Phe Ile Trp Arg Ser Ala Tyr  
 465 470 475 480

Leu Thr Arg Val Val Ser Trp Arg Asn Arg Phe Tyr Val Ala Ile Asn  
 485 490 495

Trp Leu Thr Thr Phe Val Phe Gly Arg Asp Ile Ser Arg Ile  
 500 505 510

<210> 2401

<211> 1053

<212> DNA

<213> Arabidopsis thaliana

<400> 2401

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atctccacgt ttcttcacga gaaaggctgg agaccgaaag agcccctgat cgagtatggt	180
ggttactggt ggctaccgtc tctcctcgaa ggttgatttc acgcgcaaga gttctttca	240
gcacgacca gtgacttcct cgtctgtatc taccgaaaga caggcaccac ttgggtcaaa	300
gccctgactt tcgccatcgc aaatcggtcc cgcttcgatg attcctccaa cctctcctg	360
aaacgtaacc ctacagagtt tggtccttac attgagatag attcctctt cttccctgaa	420
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&lt;210&gt; 2402

&lt;211&gt; 350

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2402

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Met Glu Ser Glu Thr Leu Thr Ala Lys Ala Thr Ile Thr Thr Thr Thr
1      5      10      15

```

```

Leu Pro Ser His Asp Glu Thr Lys Thr Glu Ser Thr Glu Phe Glu Lys
20      25      30

```

```

Asn Gln Lys Arg Tyr Gln Asp Leu Ile Ser Thr Phe Pro His Glu Lys
35      40      45

```

```

Gly Trp Arg Pro Lys Glu Pro Leu Ile Glu Tyr Gly Gly Tyr Trp Trp
50      55      60

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Leu Pro Ser Leu Leu Glu Gly Cys Ile His Ala Gln Glu Phe Phe Gln
65      70      75      80

```

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Ala Arg Pro Ser Asp Phe Leu Val Cys Ser Tyr Pro Lys Thr Gly Thr
85      90      95

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Thr Trp Leu Lys Ala Leu Thr Phe Ala Ile Ala Asn Arg Ser Arg Phe
100     105     110

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Asp Asp Ser Ser Asn Pro Leu Leu Lys Arg Asn Pro His Glu Phe Val
115     120     125

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047-E2F-PCT.ST25.txt

Pro Tyr Ile Glu Ile Asp Phe Pro Phe Phe Pro Glu Val Asp Val Leu  
130 135 140

Lys Asp Lys Gly Asn Thr Leu Phe Ser Thr His Ile Pro Tyr Glu Leu  
145 150 155 160

Leu Pro Asp Ser Val Val Lys Ser Gly Cys Lys Met Val Tyr Ile Trp  
165 170 175

Arg Glu Pro Lys Asp Thr Phe Ile Ser Met Trp Thr Phe Leu His Lys  
180 185 190

Glu Arg Thr Glu Leu Gly Pro Val Ser Asn Leu Glu Glu Ser Phe Asp  
195 200 205

Met Phe Cys Arg Gly Leu Ser Gly Tyr Gly Pro Tyr Leu Asn His Ile  
210 215 220

Leu Ala Tyr Trp Lys Ala Tyr Gln Glu Asn Pro Asp Arg Ile Leu Phe  
225 230 235 240

Leu Lys Tyr Glu Thr Met Arg Ala Asp Pro Leu Pro Tyr Val Lys Ser  
245 250 255

Leu Ala Glu Phe Met Gly His Gly Phe Thr Ala Glu Glu Glu Lys  
260 265 270

Gly Val Val Glu Lys Val Val Asn Leu Cys Ser Phe Glu Thr Leu Lys  
275 280 285

Asn Leu Glu Ala Asn Lys Gly Glu Lys Asp Arg Glu Asp Arg Pro Gly  
290 295 300

Val Tyr Ala Asn Ser Ala Tyr Phe Arg Lys Gly Lys Val Gly Asp Trp  
305 310 315 320

Ser Asn Tyr Leu Thr Pro Glu Met Ala Ala Arg Ile Asp Gly Leu Met  
325 330 335

Glu Glu Lys Phe Lys Gly Thr Gly Leu Leu Glu His Gly Lys  
340 345 350

<210> 2403

<211> 957

<212> DNA

<213> *Arabidopsis thaliana*

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gacaagatca tcatccgcga ccgtcgtggc cgaatctgtg aggtttactt gtatggaggt    180
caagtcagtt cttggaaaaa tgagaatgga gaggagttac ttgttatgag tagcaaggct    240
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aatgaggatt tgaagatctg gccgcataag ttgagtata gactgagagt agcattggga    480
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&lt;210&gt; 2404

&lt;211&gt; 318

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2404

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Leu Val Val Ala Val Val Ala Thr Ala Ile Glu His Arg Arg Asn Glu
20          25          30
Arg Thr Lys Gly Val Asn Gly Leu Asp Lys Ile Ile Ile Arg Asp Arg
35          40          45

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047-E2F-PCT.ST25.txt

Arg Gly Arg Ser Ala Glu Val Tyr Leu Tyr Gly Gly Gln Val Ser Ser  
50 55 60

Trp Lys Asn Glu Asn Gly Glu Glu Leu Leu Val Met Ser Ser Lys Ala  
65 70 75 80

Ile Phe Gln Pro Pro Thr Pro Ile Arg Gly Gly Ile Pro Val Leu Phe  
85 90 95

Pro Gln Tyr Ser Asn Thr Gly Pro Leu Pro Ser His Gly Phe Val Arg  
100 105 110

Gln Arg Phe Trp Glu Val Glu Thr Lys Pro Pro Pro Leu Pro Ser Leu  
115 120 125

Ser Thr Ala His Val Asp Leu Ile Val Arg Ser Ser Asn Glu Asp Leu  
130 135 140

Lys Ile Trp Pro His Lys Phe Glu Tyr Arg Leu Arg Val Ala Leu Gly  
145 150 155 160

His Asp Gly Asp Leu Thr Leu Thr Ser Arg Val Lys Asn Thr Asp Thr  
165 170 175

Lys Pro Phe Asn Phe Thr Phe Ala Leu His Pro Tyr Phe Ala Val Ser  
180 185 190

Asn Ile Ser Glu Ile His Val Glu Gly Leu His Asn Leu Asp Tyr Leu  
195 200 205

Asp Gln Gln Lys Asn Arg Thr Arg Phe Thr Asp His Glu Lys Val Ile  
210 215 220

Thr Phe Asn Ala Gln Leu Asp Arg Leu Tyr Leu Ser Thr Pro Asp Gln  
225 230 235 240

Leu Arg Ile Val Asp His Lys Lys Lys Lys Thr Ile Val Val His Lys  
245 250 255

Glu Gly Gln Val Asp Ala Val Val Trp Asn Pro Trp Asp Lys Val Lys  
260 265 270

Ser Asp Leu Gly Val Glu Asp Tyr Lys Arg Phe Val Thr Val Glu Ser  
275 280 285

Ala Ala Val Ala Lys Pro Ile Thr Val Asn Pro Gly Lys Glu Trp Lys  
290 295 300

## 047-E2F-PCT.ST25.txt

Gly Ile Leu His Val Ser Val Val Pro Ser Asn Arg Lys Ala  
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<210> 2405

<211> 1104

<212> DNA

<213> Arabidopsis thaliana

<400> 2405

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gcttttgcaa ggaatcctctt tcggcctcgg attctgattg atgtgagcaa gattgacatg    180
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gtgagaagag ctgagagggc tgggttcaaa gccattgctc tcaactgtaga caccccaagg    480
ctaggccgca gagagtctga tatcaagaac agattcactt tgctccaaa cctgacattg    540
aagaactttg aaggacttga cctcggaaaag atggacgagg ccaatgactc tggcttggtc    600
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gcgattcaag ctggtgcagc cggaatcatt gtatcaaacc atggagctcg ccagcttgac    780
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gctggagtta gaaagtgct tcaaatgcta cgtgatgagt tcgagctgac catggcactg   1020
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<210> 2406

<211> 367

<212> PRT

<213> Arabidopsis thaliana



&lt;400&gt; 2406

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20 25 30

Trp Thr Leu Gln Glu Asn Arg Asn Ala Phe Ala Arg Ile Leu Phe Arg  
35 40 45

Pro Arg Ile Leu Ile Asp Val Ser Lys Ile Asp Met Thr Thr Thr Val  
50 55 60

Leu Gly Phe Lys Ile Ser Met Pro Ile Met Val Ala Pro Thr Ala Met  
65 70 75 80

Gln Lys Met Ala His Pro Asp Gly Glu Tyr Ala Thr Ala Arg Ala Ala  
85 90 95

Ser Ala Ala Gly Thr Ile Met Thr Leu Ser Ser Trp Ala Thr Ser Ser  
100 105 110

Val Glu Glu Val Ala Ser Thr Gly Pro Gly Ile Arg Phe Phe Gln Leu  
115 120 125

Tyr Val Tyr Lys Asn Arg Asn Val Val Glu Gln Leu Val Arg Arg Ala  
130 135 140

Glu Arg Ala Gly Phe Lys Ala Ile Ala Leu Thr Val Asp Thr Pro Arg  
145 150 155 160

Leu Gly Arg Arg Glu Ser Asp Ile Lys Asn Arg Phe Thr Leu Pro Pro  
165 170 175

Asn Leu Thr Leu Lys Asn Phe Glu Gly Leu Asp Leu Gly Lys Met Asp  
180 185 190

Glu Ala Asn Asp Ser Gly Leu Ala Ser Tyr Val Ala Gly Gln Ile Asp  
195 200 205

Arg Thr Leu Ser Trp Lys Asp Val Gln Trp Leu Gln Thr Ile Thr Lys  
210 215 220

Leu Pro Ile Leu Val Lys Gly Val Leu Thr Gly Glu Asp Ala Arg Ile  
225 230 235 240

047-E2F-PCT.ST25.txt

Ala Ile Gln Ala Gly Ala Ala Gly Ile Ile Val Ser Asn His Gly Ala  
245 250 255

Arg Gln Leu Asp Tyr Val Pro Ala Thr Ile Ser Ala Leu Glu Glu Val  
260 265 270

Val Lys Ala Thr Gln Gly Arg Ile Pro Val Phe Leu Asp Gly Gly Val  
275 280 285

Arg Arg Gly Thr Asp Val Phe Lys Ala Leu Ala Leu Gly Ala Ser Gly  
290 295 300

Ile Phe Ile Gly Arg Pro Val Val Phe Ser Leu Ala Ala Glu Gly Glu  
305 310 315 320

Ala Gly Val Arg Lys Val Leu Gln Met Leu Arg Asp Glu Phe Glu Leu  
325 330 335

Thr Met Ala Leu Ser Gly Cys Arg Ser Leu Lys Glu Ile Ser Arg Asn  
340 345 350

His Ile Thr Thr Glu Trp Asp Thr Pro Arg Pro Ser Ala Arg Leu  
355 360 365

<210> 2407

<211> 984

<212> DNA

<213> Arabidopsis thaliana

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aaagcggag agataataag acaacaagtg gagacgcttt actacaaaca cggtaacaca 180  
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<210> 2408

<211> 327

<212> PRT

<213> Arabidopsis thaliana

<400> 2408

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	20					25					30	
Asn Tyr Tyr	Lys	Glu	Ser	Cys	Pro	Lys	Ala	Glu	Glu	Ile	Ile	Arg Gln
	35				40					45		
Gln Val Glu	Thr	Leu	Tyr	Tyr	Lys	His	Gly	Asn	Thr	Ala	Val	Ser Trp
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Leu Arg Asn	Leu	Phe	His	Asp	Cys	Val	Val	Lys	Ser	Cys	Asp	Ala Ser
65			70					75				80
Leu Leu Leu	Glu	Thr	Ala	Arg	Gly	Val	Glu	Ser	Glu	Gln	Lys	Ser Lys
		85				90					95	
Arg Ser Phe	Gly	Met	Arg	Asn	Phe	Lys	Tyr	Val	Lys	Ile	Ile	Lys Asp
	100					105				110		
Ala Leu Glu	Lys	Glu	Cys	Pro	Ser	Thr	Val	Ser	Cys	Ala	Asp	Ile Val
	115				120					125		
Ala Leu Ser	Ala	Arg	Asp	Gly	Ile	Val	Met	Leu	Lys	Gly	Pro	Lys Ile
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047-E2F-PCT.ST25.txt

Glu Met Ile Lys Thr Gly Arg Arg Asp Ser Arg Gly Ser Tyr Leu Gly  
145 150 155 160

Asp Val Glu Thr Leu Ile Pro Asn His Asn Asp Ser Leu Ser Ser Val  
165 170 175

Ile Ser Thr Phe Asn Ser Ile Gly Ile Asp Val Glu Ala Thr Val Ala  
180 185 190

Leu Leu Gly Ala His Ser Val Gly Arg Val His Cys Val Asn Leu Val  
195 200 205

His Arg Leu Tyr Pro Thr Ile Asp Pro Thr Leu Asp Pro Ser Tyr Ala  
210 215 220

Leu Tyr Leu Lys Lys Arg Cys Pro Ser Pro Thr Pro Asp Pro Asn Ala  
225 230 235 240

Val Leu Tyr Ser Arg Asn Asp Arg Glu Thr Pro Met Val Val Asp Asn  
245 250 255

Met Tyr Tyr Lys Asn Ile Met Ala His Lys Gly Leu Leu Val Ile Asp  
260 265 270

Asp Glu Leu Ala Thr Asp Pro Arg Thr Ala Pro Phe Val Ala Lys Met  
275 280 285

Ala Ala Asp Asn Asn Tyr Phe His Glu Gln Phe Ser Arg Gly Val Arg  
290 295 300

Leu Leu Ser Glu Thr Asn Pro Leu Thr Gly Asp Gln Gly Glu Ile Arg  
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Lys Asp Cys Arg Tyr Val Asn  
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<210> 2409

<211> 609

<212> DNA

<213> Arabidopsis thaliana

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## 047-E2F-PCT.ST25.txt

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&lt;210&gt; 2410

&lt;211&gt; 202

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2410

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Met Ala Phe Asn Ile Ile Thr Pro Gly Arg Val Tyr Ser Ala Thr Ser
1      5      10

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Leu Thr Phe Val Ser Thr Ile Lys Ala Ala Phe Val Lys Pro Pro Leu
20     25     30

```

```

Ala Ser Pro Ser Arg Arg Asn Leu Leu Arg Phe Ser Ser Ser Pro Leu
35     40     45

```

```

Ser Phe Pro Ser Leu Arg Arg Gly Phe His Gly Gly Arg Ile Val Ala
50     55     60

```

```

Met Gly Ser Ser Ala Pro Glu Ser Val Asn Lys Pro Glu Glu Glu Trp
65     70     75     80

```

```

Arg Ala Ile Leu Ser Pro Glu Gln Phe Arg Ile Leu Arg Gln Lys Gly
85     90     95

```

```

Thr Glu Tyr Pro Gly Thr Gly Glu Tyr Asn Lys Val Phe Asp Asp Gly
100    105    110

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Ile Tyr Cys Cys Ala Gly Cys Gly Thr Pro Leu Tyr Lys Ser Thr Thr
115    120    125

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047-E2F-PCT.ST25.txt

Lys Phe Asp Ser Gly Cys Gly Trp Pro Ala Phe Phe Asp Gly Leu Pro  
130 135 140

Gly Ala Ile Thr Arg Thr Pro Asp Pro Asp Gly Arg Arg Ile Glu Ile  
145 150 155

Thr Cys Ala Ala Cys Gly Gly His Leu Gly His Val Phe Lys Gly Glu  
165 170 175

Gly Phe Pro Thr Pro Thr Asp Glu Arg His Cys Val Asn Ser Ile Ser  
180 185 190

Leu Lys Phe Thr Pro Glu Asn Pro Thr Leu  
195 200

<210> 2411

<211> 1161

<212> DNA

<213> Arabidopsis thaliana

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gagatatgtc atttgaagaa gacaatcttg tctgtagaag atatcattga tctgatcgga 180  
gacaagtgtg atggagtcac cggtcagttg acggaagatt ggggagagac tctgtttcta 240  
gctttgagca aagctggagg gaaagctttc agtaacatgg ccgttggtta taacaacggt 300  
gatgttgaag ctgccataaa gtatggaatt gctgtcggtg acactccggg agtgttgact 360  
gagacgacgg ctgaactagc tgcttctctt tccttggctg ctgcaagaag aattgttgaa 420  
gccgacgaat tcattgagag tggcttgtag gagggatggc ttctcatctc gtttgtgggg 480  
aacttactta aaggacagac tgttgagatt attggagctg gacgtattgg atctgcttat 540  
gctagaatga tgggtgaagg gttcaagatg aatttgatct actttgatct ttaccaatcc 600  
actcgtcttg agaaatttgt gacagcttat ggacagttct tgaaagcaaa tggagaacaa 660  
cctgtgacat ggaacagagc ttcgtccatg gaggagggtc tgcgtgaggc tgatctgata 720  
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<210> 2412

<211> 386

<212> PRT

<213> Arabidopsis thaliana

<400> 2412

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Arg Val Val Ser Thr Lys Pro Met Pro Gly Thr Arg Trp Ile Asn Leu  
20 25 30

Leu Val Asp Gln Gly Cys Arg Val Glu Ile Cys His Leu Lys Lys Thr  
35 40 45

Ile Leu Ser Val Glu Asp Ile Ile Asp Leu Ile Gly Asp Lys Cys Asp  
50 55 60

Gly Val Ile Gly Gln Leu Thr Glu Asp Trp Gly Glu Thr Leu Phe Ser  
65 70 75 80

Ala Leu Ser Lys Ala Gly Gly Lys Ala Phe Ser Asn Met Ala Val Gly  
85 90 95

Tyr Asn Asn Val Asp Val Glu Ala Ala Asn Lys Tyr Gly Ile Ala Val  
100 105 110

Gly Asn Thr Pro Gly Val Leu Thr Glu Thr Thr Ala Glu Leu Ala Ala  
115 120 125

Ser Leu Ser Leu Ala Ala Ala Arg Arg Ile Val Glu Ala Asp Glu Phe  
130 135 140

Met Arg Gly Gly Leu Tyr Glu Gly Trp Leu Pro His Leu Phe Val Gly  
145 150 155 160

Asn Leu Leu Lys Gly Gln Thr Val Gly Val Ile Gly Ala Gly Arg Ile  
3425

Gly Ser Ala Tyr Ala Arg Met Met Val Glu Gly Phe Lys Met Asn Leu  
180 185 190

Ile Tyr Phe Asp Leu Tyr Gln Ser Thr Arg Leu Glu Lys Phe Val Thr  
195 200 205

Ala Tyr Gly Gln Phe Leu Lys Ala Asn Gly Glu Gln Pro Val Thr Trp  
210 215 220

Lys Arg Ala Ser Ser Met Glu Glu Val Leu Arg Glu Ala Asp Leu Ile  
225 230 235 240

Ser Leu His Pro Val Leu Asp Lys Thr Thr Tyr His Leu Val Asn Lys  
245 250 255

Glu Arg Leu Ala Met Met Lys Lys Glu Ala Ile Leu Val Asn Cys Ser  
260 265 270

Arg Gly Pro Val Ile Asp Glu Ala Ala Leu Val Glu His Leu Lys Glu  
275 280 285

Asn Pro Met Phe Arg Val Gly Leu Asp Val Phe Glu Glu Glu Pro Phe  
290 295 300

Met Lys Pro Gly Leu Ala Asp Thr Lys Asn Ala Ile Val Val Pro His  
305 310 315 320

Ile Ala Ser Ala Ser Lys Trp Thr Arg Glu Gly Met Ala Thr Leu Ala  
325 330 335

Ala Leu Asn Val Leu Gly Arg Val Lys Gly Tyr Pro Ile Trp His Asp  
340 345 350

Pro Asn Arg Val Asp Pro Phe Leu Asn Glu Asn Ala Ser Pro Pro Asn  
355 360 365

Ala Ser Pro Ser Ile Val Asn Ser Lys Ala Leu Gly Leu Pro Val Ser  
370 375 380

Lys Leu  
385

<210> 2413

<211> 516



&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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cagatgatta tgcctgtgat caaagctcaa cgcgttggtg gtgatgatgt tgatggatct      180
aatggaagac gatcagccat ggttttctta gcagctacac tcttctccac tgctgctggt      240
tctgcttctg ctaatgctgg cgtcattgac gaatacctcg agaggagcaa aaccaacaaa      300
gaacttaatg ataagaagag attggcaaca agtggagcaa actttgcgag agcattcact      360
gttcaattcg gaagctgcaa gttccctgag aatttctact gctgccaaga tcttgccaag      420
caaaagaaag ttccatttat ctcaagaagt attgctttgg aatgcgaagg caaggacaa      480
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&lt;210&gt; 2414

&lt;211&gt; 171

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

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<400> 2414
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20     25     30
Ser Val Gly Phe Gly Gln Lys Lys Gln Met Ile Met Pro Val Ile Lys
35     40     45
Ala Gln Arg Val Val Gly Asp Asp Val Asp Gly Ser Asn Gly Arg Arg
50     55     60
Ser Ala Met Val Phe Leu Ala Ala Thr Leu Phe Ser Thr Ala Ala Val
65     70     75     80
Ser Ala Ser Ala Asn Ala Gly Val Ile Asp Glu Tyr Leu Glu Arg Ser
85     90     95
Lys Thr Asn Lys Glu Leu Asn Asp Lys Lys Arg Leu Ala Thr Ser Gly
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```

Ala Asn Phe Ala Arg Ala Phe Thr Val Gln Phe Gly Ser Cys Lys Phe  
115 120

Pro Glu Asn Phe Thr Gly Cys Gln Asp Leu Ala Lys Gln Lys Lys Val  
130 135 140

Pro Phe Ile Ser Glu Asp Ile Ala Leu Glu Cys Glu Gly Lys Asp Lys  
145 150 155 160

Tyr Lys Cys Gly Ser Asn Val Phe Trp Lys Trp  
165 170

<210> 2415

<211> 624

<212> DNA

<213> Arabidopsis thaliana

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gttcactctg agaccgttct cactgccgac gatgacatta tccgatcatc ttcttccaag 600  
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<210> 2416

<211> 207

<212> PRT

<213> Arabidopsis thaliana

&lt;400&gt; 2416

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Asn Val Ser Ser Gln Pro Leu Leu Ser Phe Ser His Ser Leu Arg Pro  
 20 25 30

Phe Ile Ser Lys Ser Lys Pro Met Cys Ala Ser Ile Gln Lys Arg Asp  
 35 40 45

Gly Ser Gln Phe Val Val Lys Ser Gln Ala Leu Asp Phe Ser Gly Thr  
 50 55 60

Phe Phe Glu Gly Gly Phe Gly Ser Asp Asp Asp Pro Thr Ser Pro Ser  
 65 70 75 80

Gly Ser Gly Val Ser Thr Ala Leu Glu Asp Lys Pro Glu Pro Gln Cys  
 85 90 95

Pro Pro Gly Leu Arg Gln Tyr Glu Thr Met Ala Val Leu Arg Pro Asp  
 100 105 110

Met Ser Glu Asp Glu Arg Leu Gly Leu Thr Gln Lys Tyr Glu Glu Leu  
 115 120 125

Leu Val Ala Gly Gly Gly Met Tyr Val Glu Val Phe Asn Arg Gly Val  
 130 135 140

Ile Pro Leu Ala Tyr Ser Ile Arg Lys Lys Asn Lys Ala Gly Glu Thr  
 145 150 155 160

Asn Thr Tyr Leu Asp Gly Ile Tyr Leu Leu Phe Thr Tyr Phe Thr Lys  
 165 170 175

Pro Glu Ser Ile Val Pro Leu Glu Thr Val Leu Thr Ala Asp Asp Asp  
 180 185 190

Ile Ile Arg Ser Ser Ser Phe Lys Ile Lys Lys Arg Lys Tyr Asn  
 195 200 205

&lt;210&gt; 2417

&lt;211&gt; 1266

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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 ttggtctctt atggacctac ctctcgcgat atcacttggg gtgctggtgg atccacagct 180  
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<211> 421

<212> PRT

<213> *Arabidopsis thaliana*

<400> 2418

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 20 25 30  
 Asn Leu Phe Glu Arg Met Asp Arg Leu Val Ser Tyr Gly Pro Thr Phe  
 35 40 45  
 Cys Asp Ile Thr Trp Gly Ala Gly Gly Ser Thr Ala Asp Leu Thr Leu  
 50 55 60  
 Glu Ile Ala Ser Arg Met Gln Asn Val Ile Cys Val Glu Thr Met Met  
 65 70 75 80  
 His Leu Thr Cys Thr Asn Met Pro Ile Glu Lys Ile Asp His Ala Leu  
 85 90 95  
 Glu Thr Ile Arg Ser Asn Gly Ile Gln Asn Val Leu Ala Leu Arg Gly  
 100 105 110  
 Asp Pro Pro His Gly Gln Asp Lys Phe Val Gln Val Glu Gly Gly Phe  
 115 120 125  
 Ala Cys Ala Leu Asp Leu Val Asn His Ile Arg Ser Lys Tyr Gly Asp  
 130 135 140  
 Tyr Phe Gly Ile Thr Val Ala Gly Tyr Pro Glu Ala His Pro Asp Val  
 145 150 155 160  
 Ile Glu Ala Asp Gly Leu Ala Thr Pro Glu Ser Tyr Gln Ser Asp Leu  
 165 170 175  
 Ala Tyr Leu Lys Lys Val Asp Ala Gly Ala Asp Leu Ile Val Thr  
 180 185 190  
 Gln Leu Phe Tyr Asp Thr Asp Ile Phe Leu Lys Phe Val Asn Asp Cys  
 195 200 205  
 Arg Gln Ile Gly Ile Asn Cys Pro Ile Val Pro Gly Ile Met Pro Ile  
 210 215 220  
 Ser Asn Tyr Lys Gly Phe Leu Arg Met Ala Gly Phe Cys Lys Thr Lys  
 225 230 235 240  
 Ile Pro Ala Glu Leu Thr Ala Ala Leu Glu Pro Ile Lys Asp Asn Asp  
 245 250 255  
 Glu Ala Val Lys Ala Tyr Gly Ile His Phe Ala Thr Glu Met Cys Lys  
 260 265 270

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Lys Ile Leu Ala His Gly Ile Thr Ser Leu His Leu Tyr Thr Leu Asn  
 275 280 285

Val Asp Lys Ser Ala Ile Gly Ile Leu Met Asn Leu Gly Leu Ile Asp  
 290 295 300

Glu Ser Lys Ile Ser Arg Ser Leu Pro Trp Arg Arg Pro Ala Asn Val  
 305 310 315 320

Phe Arg Thr Lys Glu Asp Val Arg Pro Ile Phe Trp Ala Asn Arg Pro  
 325 330 335

Lys Ser Tyr Ile Ser Arg Thr Lys Gly Trp Asn Asp Phe Pro His Gly  
 340 345 350

Arg Trp Gly Asp Ser His Ser Ala Ala Tyr Ser Thr Leu Ser Asp Tyr  
 355 360 365

Gln Phe Ala Arg Pro Lys Gly Arg Asp Lys Lys Leu Gln Gln Glu Trp  
 370 375 380

Val Val Pro Leu Lys Ser Ile Glu Asp Val Gln Glu Val Gly Phe Thr  
 385 390 395 400

Leu Arg Thr Leu Val Gln Ile Val Ser Ile Ser Phe Pro His Thr His  
 405 410 415

Leu His Ile Phe Met  
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<210> 2419

<211> 615

<212> DNA

<213> Arabidopsis thaliana

<400> 2419  
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<210> 2420

<211> 204

<212> PRT

<213> Arabidopsis thaliana

<400> 2420

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 20 25 30

Lys Ser Leu Ser Phe Thr Lys Thr Ala Ile Arg Ala Glu Lys Thr Glu  
 35 40 45

Ser Ser Ser Ala Ala Pro Ala Val Lys Glu Ala Pro Val Gly Phe Thr  
 50 55 60

Pro Pro Gln Leu Asp Pro Asn Thr Pro Ser Pro Ile Phe Ala Gly Ser  
 65 70 75 80

Thr Gly Gly Leu Leu Arg Lys Ala Gln Val Glu Glu Phe Tyr Val Ile  
 85 90 95

Thr Trp Asn Ser Pro Lys Glu Gln Ile Phe Glu Met Pro Thr Gly Gly  
 100 105 110

Ala Ala Ile Met Arg Glu Gly Pro Asn Leu Leu Lys Leu Ala Arg Lys  
 115 120 125

Glu Gln Cys Leu Ala Leu Gly Thr Arg Leu Arg Ser Lys Tyr Lys Ile  
 130 135 140

Thr Tyr Gln Phe Tyr Arg Val Phe Pro Asn Gly Glu Val Gln Tyr Leu  
 145 150 155 160

047-E2F-PCT.ST25.txt

His Pro Lys Asp Gly Val Tyr Pro Glu Lys Ala Asn Pro Gly Arg Glu  
165 170 175

Gly Val Gly Leu Asn Met Arg Ser Ile Gly Lys Asn Val Ser Pro Ile  
180 185 190

Glu Val Lys Phe Thr Gly Lys Gln Ser Tyr Asp Leu  
195 200

<210> 2421

<211> 849

<212> DNA

<213> Arabidopsis thaliana

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gttgcttaca tacttaactt gcagcaggat aaggacattg agtattgggg aatcgatttg 420  
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<211> 282

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<213> Arabidopsis thaliana



&lt;400&gt; 2422

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Lys Phe Ser Gly Glu Asn Pro Gly Thr Asn Gly Val Ser Leu Ser Ser
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Lys Asn Lys Met Glu Asp Tyr Asn Thr Ala Met Lys Arg Leu Met Arg
65      70      75      80

Ser Pro Tyr Glu Tyr His His Asp Leu Gly Met Asn Tyr Thr Leu Ile
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Arg Asp Glu Leu Ile Val Gly Ser Gln Pro Gln Lys Pro Glu Asp Ile
      100      105      110

Asp His Leu Lys Gln Glu Gln Asn Val Ala Tyr Ile Leu Asn Leu Gln
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Gln Asp Lys Asp Ile Glu Tyr Trp Gly Ile Asp Leu Asp Ser Ile Val
      130      135      140

Arg Arg Cys Lys Glu Leu Gly Ile Arg His Met Arg Arg Pro Ala Lys
145      150      155      160

Asp Phe Asp Pro Leu Ser Leu Arg Ser Gln Leu Pro Lys Ala Val Ser
      165      170      175

Ser Leu Glu Trp Ala Val Ser Glu Gly Lys Gly Arg Val Tyr Val His
      180      185      190

Cys Ser Ala Gly Leu Gly Arg Ala Pro Gly Val Ser Ile Ala Tyr Met
      195      200      205

Tyr Trp Phe Cys Asp Met Asn Leu Asn Thr Ala Tyr Asp Thr Leu Val
      210      215      220

Ser Lys Arg Pro Cys Gly Pro Asn Lys Gly Ala Ile Arg Gly Ala Thr
225      230      235      240

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Tyr Asp Leu Ala Lys Asn Asp Pro Trp Lys Glu Pro Phe Glu Ser Leu  
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Pro Glu Asn Ala Phe Glu Asp Ile Ala Asp Trp Glu Arg Lys Leu Ile  
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<211> 1533

<212> DNA

<213> Arabidopsis thaliana

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<211> 510

<212> PRT

<213> Arabidopsis thaliana

<400> 2424

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Ile Gln Val Pro Ser Asp Lys Leu Trp Gly Ala Gln Thr Gln Arg Ser  
50 55 60

Leu Gln Asn Phe Glu Ile Gly Gly Asp Arg Glu Arg Met Pro Glu Pro  
65 70 75 80

Ile Val Arg Ala Phe Gly Val Leu Lys Lys Cys Ala Ala Lys Val Asn  
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Met Glu Tyr Gly Leu Asp Pro Met Ile Gly Glu Ala Ile Met Glu Ala  
100 105 110

Ala Gln Glu Val Ala Glu Gly Lys Leu Asn Asp His Phe Pro Leu Val  
115 120 125

Val Trp Gln Thr Gly Ser Gly Thr Gln Ser Asn Met Asn Ala Asn Glu  
130 135 140

Val Ile Ala Asn Arg Ala Ala Glu Ile Leu Gly His Lys Arg Gly Glu  
Page 3437

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 Lys Ile Val His Pro Asn Asp His Val Asn Arg Ser Gln Ser Ser Asn  
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 Ser Arg Leu Ile Pro Ser Leu Lys Asn Leu His Ser Ser Leu Glu Ser  
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 Thr Lys Lys Gly Phe Asp Val Lys Ile Ala Ala Ala Val Ala Glu Glu  
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 Thr Met Val Cys Ala Gln Val Met Gly Asn His Val Ala Val Thr Ile  
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 Gly Gly Ser Asn Gly His Phe Glu Leu Asn Val Phe Lys Pro Val Ile  
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Ala Ser Ala Leu Leu His Ser Ile Arg Leu Ile Ala Asp Ala Ser Ala  
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Ser Phe Glu Lys Asn Cys Val Arg Gly Ile Glu Ala Asn Arg Glu Arg  
420 425 430

Ile Ser Lys Leu Leu His Glu Ser Leu Met Leu Val Thr Ser Leu Asn  
435 440 445

Pro Lys Ile Gly Tyr Asp Asn Ala Ala Ala Val Ala Lys Arg Ala His  
450 455 460

Lys Glu Gly Cys Thr Leu Lys Val Asn Asn Lys Leu Leu Thr Phe Ser  
465 470 475 480

Ser Leu Asn Lys Ser Glu Phe Lys Pro Ile Phe Ser Lys Arg Lys His  
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<211> 777

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<213> Arabidopsis thaliana

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<211> 258

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<213> Arabidopsis thaliana

<400> 2426

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Lys Arg Phe Ser Leu Ile Ser Val Pro Arg Ala Ser Ser Asp Asn Gly  
35 40 45

Thr Thr Ser Pro Val Val Glu Ile Pro Lys Pro Ala Ser Val Ala Val  
50 55 60

Glu Glu Val Pro Val Lys Ser Pro Ala Glu Ser Ser Ser Ala Ser Glu  
65 70 75 80

Asn Gly Ala Val Gly Gly Glu Ala Thr Asp Ser Ser Thr Glu Thr Val  
85 90 95

Ile Lys Tyr Gln Asn Ala Lys Trp Val Asn Gly Thr Trp Asp Leu Lys  
100 105 110

Gln Phe Glu Lys Asp Gly Lys Thr Asp Trp Asp Ser Val Ile Val Ser  
115 120 125

Glu Ala Lys Arg Arg Lys Trp Leu Glu Asp Asn Pro Glu Thr Thr Ser  
130 135 140

Asn Asp Glu Leu Val Val Phe Asp Thr Ser Ile Ile Pro Trp Trp Ala  
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Trp Met Lys Arg Tyr His Leu Pro Glu Ala Glu Leu Leu Asn Gly Arg  
165 170 175

Ala Ala Met Ile Gly Phe Phe Met Ala Tyr Phe Val Asp Ser Leu Thr  
180 185 190

Gly Val Gly Leu Val Asp Gln Met Gly Asn Phe Phe Cys Lys Thr Leu  
 195 200 205

Leu Phe Val Ala Val Ala Gly Val Leu Phe Ile Arg Lys Asn Glu Asp  
 210 215 220

Leu Asp Lys Leu Lys Asp Leu Phe Asp Glu Thr Thr Leu Tyr Asp Lys  
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<212> DNA

<213> Arabidopsis thaliana

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<210> 2428

<211> 473

<212> PRT

<213> Arabidopsis thaliana

<400> 2428

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Asp Ser Thr Ser Phe Ser Thr Met Leu Pro Trp Asn Thr Ile Arg Ser  
 35 40 45

Asp Pro Leu Gln Met Gly Gly Phe Asp Ile Phe Asn Ser Met Leu Thr  
 50 55 60

Asn Lys Tyr Leu Ser Ser Ser Pro Arg Ser Ile Asp Val Gln Asp Asn  
 65 70 75 80

Arg Asn Val Glu Phe Met Ala Pro Pro Pro His Pro Pro Pro Leu His  
 85 90 95

Pro Leu Asp His Leu Arg His Tyr Asp Asp Ser Ser Asn Asn Met Trp  
 100 105 110

Gly Phe Glu Ala Asn Ser Glu Phe Gln Ala Phe Ser Gly Val Val Gly  
 115 120 125

Pro Ser Glu Pro Met Met Ser Thr Phe Gly Glu Glu Asp Phe Pro Phe  
 130 135 140



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Leu Ile Ser Asn Lys Arg Asn Asn Glu Leu Ser Leu Ser Leu Ala Ser  
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 Asp Val Ser Asp Glu Cys Ser Glu Ile Ser Leu Cys Ala Ala Thr Arg  
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 Leu Ala Ser Glu Gln Ala Ser Cys Ser Ser Lys Asp Ile Ser Asn Asn  
 180 185 190  
 Val Val Thr Gln Gly Phe Ser Gln Leu Ile Phe Gly Ser Lys Tyr Leu  
 195 200 205  
 His Ser Val Gln Glu Ile Leu Ser His Phe Ala Ala Tyr Ser Leu Asp  
 210 215 220  
 Tyr Ser Ser Arg Gly Thr Glu Ser Gly Ala Ala Ser Ser Ala Phe Thr  
 225 230 235 240  
 Ser Arg Phe Glu Asn Ile Thr Glu Phe Leu Asp Gly Asp Ser Asn Asn  
 245 250 255  
 Ser Glu Ala Gly Phe Gly Ser Thr Phe Gln Arg Arg Ala Leu Glu Ala  
 260 265 270  
 Lys Lys Thr His Leu Leu Asp Leu Leu Gln Met Val Asp Asp Arg Tyr  
 275 280 285  
 Ser His Cys Val Asp Glu Ile His Thr Val Ile Ser Ala Phe His Ala  
 290 295 300  
 Ala Thr Glu Leu Asp Pro Gln Leu His Thr Arg Phe Ala Leu Gln Thr  
 305 310 315 320  
 Val Ser Phe Leu Tyr Lys Asn Leu Arg Glu Arg Ile Cys Lys Lys Ile  
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 340 345 350  
 Thr Ser Met Phe His Gln His Cys Leu Leu Gln Gln Leu Lys Arg Lys  
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 Ser Val Leu Arg Asn Trp Met Phe Gln Asn Phe Leu His Pro Tyr Pro  
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385

390

395

400

Lys Asp Ser Glu Lys His Leu Leu Ala Ile Arg Ser Gly Leu Thr Arg  
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Ser Gln Val Ser Asn Trp Phe Ile Asn Ala Arg Val Arg Leu Trp Lys  
 420 425 430

Pro Met Ile Glu Glu Met Tyr Ala Glu Met Asn Lys Arg Lys Leu Asn  
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Val Met Met Ser Gln Ala Met His Lys  
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&lt;211&gt; 1404

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2429

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&lt;211&gt; 467

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2430

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Asp Asp Gly Val Tyr Asp Asn Val Thr Lys Val Tyr Val Gly Gln Gly  
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Gln Tyr Gly Ile Ala Phe Val Lys Phe Glu Tyr Ala Asn Gly Ser Glu  
 35 40 45

Val Val Val Gly Asp Glu His Gly Glu Lys Thr Glu Leu Gly Val Glu  
 50 55 60

Glu Phe Glu Ile Asp Ser Asp Asp Tyr Ile Val Tyr Val Glu Gly Tyr  
 65 70 75 80

Arg Glu Lys Val Ser Asp Met Thr Ser Glu Met Ile Thr Phe Leu Ser  
 85 90 95

Phe Lys Thr Ser Lys Gly Lys Thr Ser Gln Pro Ile Val Lys Lys Pro  
 100 105 110

Gly Val Lys Phe Val Leu His Gly Gly Lys Ile Val Gly Phe His Gly  
 115 120 125

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Arg Ser Thr Asp Val Leu His Ser Leu Gly Ala Tyr Val Ser Leu Pro  
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Ser Thr Pro Lys Leu Leu Gly Asn Trp Ile Lys Val Glu Gln Asn Gly  
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Glu Gly Pro Gly Leu Arg Cys Ser His Gly Ile Ala Gln Val Gly Asn  
165 170 175

Lys Ile Tyr Ser Phe Gly Gly Glu Leu Ile Pro Asn Gln Pro Ile Asp  
180 185 190

Lys His Leu Tyr Val Phe Asp Leu Glu Thr Arg Thr Trp Ser Ile Ala  
195 200 205

Pro Ala Thr Gly Asp Val Pro His Leu Ser Cys Leu Gly Val Arg Met  
210 215 220

Val Ser Val Gly Ser Thr Leu Tyr Thr Phe Gly Gly Arg Asp Phe Ser  
225 230 235 240

Arg Gln Tyr Asn Gly Phe Tyr Ser Phe Asp Thr Thr Thr Asn Glu Trp  
245 250 255

Lys Leu Leu Thr Pro Val Glu Glu Gly Pro Thr Pro Arg Ser Phe His  
260 265 270

Ser Met Ala Ala Asp Glu Glu Asn Val Tyr Val Phe Gly Gly Val Gly  
275 280 285

Ala Met Asp Arg Ile Lys Thr Leu Asp Ser Tyr Asn Ile Val Asp Lys  
290 295 300

Thr Trp Phe His Cys Ser Asn Pro Gly Asp Ser Phe Ser Ile Arg Gly  
305 310 315 320

Gly Ala Gly Leu Glu Val Val Gln Gly Lys Val Trp Ile Val Tyr Gly  
325 330 335

Phe Asn Gly Cys Glu Val Asp Asp Val His Phe Tyr Asp Pro Ala Glu  
340 345 350

Asp Lys Trp Thr Gln Val Glu Thr Phe Gly Val Lys Pro Asn Glu Arg  
355 360 365

Ser Val Phe Ala Ser Ala Ala Ile Gly Lys His Ile Val Ile Phe Gly  
370 375 380

Gly Glu Ile Ala Met Asp Pro Arg Ala His Val Gly Pro Gly Gln Leu  
 385 390 395 400

Ile Asp Gly Thr Phe Ala Leu Asp Thr Glu Thr Leu Gln Trp Glu Arg  
 405 410 415

Leu Asp Lys Phe Glu Gly Thr Pro Ser Ser Arg Gly Trp Thr Ala Ser  
 420 425 430

Thr Thr Gly Thr Ile Asp Gly Lys Lys Gly Leu Val Met His Gly Gly  
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<211> 3177

<212> DNA

<213> Arabidopsis thaliana

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<213> Arabidopsis thaliana

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130

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 Phe Val Asp Leu Cys Lys Arg Lys Asn Glu Asp Arg Met Trp Val Asp  
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 Gln Ile Thr Ala Met Gln Ala Phe Pro Arg Pro Glu Leu Thr Phe Met  
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 Gly Asp Ser Gly Ile Val Leu Ala Gly Glu Glu Asn Asp Leu Leu Asn  
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 Ala Thr Asn Val Lys His Gly Asn Ser Met Asp Ala Ser Ser Gln Gly  
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 Ser Phe Glu Thr Gly Gln Glu Gly Arg Ala Gln Met Ala Met Pro Trp  
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 Pro Asn Gln Phe Pro Gln Tyr Met Gln Asn Phe Gln Gly His Gly Tyr  
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 Pro Pro Pro Tyr Met Phe Pro Gly Met Gln Gly Gln Ser Pro Tyr Phe  
 305 310 315 320  
 His Gly Asn Met Gln Trp Pro Val Asn Met Gly Asp Val Glu Ser Asn  
 325 330 335  
 Glu Lys Ser Ser Lys Lys Lys Lys Lys Lys Lys Asn Lys Lys Lys  
 340 345 350  
 Ser Lys Gln Asp Glu Ser Ala Glu Pro Ser Asp Asn Ser Ser Thr Glu  
 355 360 365  
 Thr Glu Ser Glu Asp Gly Asn Glu Gly Lys Lys Gln Ser Arg Lys Val  
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 420 425 430  
 Arg His Lys Ser Thr Ser His Arg Gln Arg Lys His Lys Ser His Asn  
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 Gly Asp Asp Asp Ser Ser Asn Lys Glu Thr Lys Gly Asn Asp Asn Trp  
 450 455  
 Asp Ala Phe Gln Asn Leu Leu Leu Lys Asp Asn Asp Ser Glu Pro Glu  
 465 470 475  
 Glu Leu Leu Arg Ile Ser Ser Thr Ala Leu Asn Met Ala Ser Glu Val  
 485 490 495  
 Val Arg Lys Arg Glu Pro Pro Ser Asp Asp Ser Phe Leu Val Ala Ile  
 500 505 510  
 Gly Asn Glu Asp Trp Gly Arg Glu Thr Ser Ile Glu Lys Phe Asn Ala  
 515 520 525  
 Gly Glu Asn Val Arg Ile Ile Arg Lys Gly Asn Asn Tyr Asp Glu Glu  
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 Met Leu Asn Pro Gly Arg Ser Asp Glu Ser Arg Ser Tyr Ser Gln Ala  
 545 550 555 560  
 Glu Met Ser Val His Asp Gly Lys Leu Arg Thr Arg Asn Glu Ala Glu  
 565 570 575  
 Glu Asp Trp Phe Ile Arg Asn Gln Ala Gly Pro Glu Thr Asp Pro Ser  
 580 585 590  
 Leu Val Lys Thr Phe Val Gly Asp His Phe His Leu Asn Lys Ser Ser  
 595 600  
 Glu Arg Asp Val Leu Thr Asp Asp Ser Phe Met Ile His Ser Arg Val  
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047-E2F-PCT.ST25.txt

Asp Val Tyr Gly Thr Thr Gln Gln Glu Asn Ser Ala Pro Glu Asn Thr  
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 675 680 685  
 Asn Thr Leu Ala Gln Arg Thr Ser Arg Ile Asp Leu Ile Thr Ala Thr  
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 Lys Ala Ser Ala Gly Glu Gln Thr Leu Asp Gly Lys Glu Lys Lys Ser  
 705 710 715 720  
 Arg Gly Ile Ser Lys Gly Lys Asp Ala Lys Ser Arg Ala Ser Ser Arg  
 725 730 735  
 Pro Asp Pro Ala Ser Lys Ala Lys Arg Pro Ala Trp Gly Ser Arg Ala  
 740 745 750  
 Ala Val Ser Lys Ser Lys Ser Glu Met Glu Glu Glu Arg Lys Lys Arg  
 755 760 765  
 Met Glu Glu Leu Leu Ile Gln Arg Gln Lys Arg Ile Ala Glu Lys Ser  
 770 775 780  
 Ser Gly Gly Ser Val Ser Ser Ser Leu Ala Ser Lys Lys Thr Pro Thr  
 785 790 795 800  
 Val Thr Lys Ser Val Lys Ser Ser Ile Lys Asn Glu Lys Thr Pro Glu  
 805 810 815  
 Ala Ala Gln Ser Lys Ala Lys Pro Val Leu Arg Ser Ser Thr Ile Glu  
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 Arg Leu Ala Val Ala Arg Thr Ala Pro Lys Glu Pro Gln Gln Lys Pro  
 835 840 845  
 Val Ile Lys Arg Thr Ser Lys Pro Ser Gly Tyr Lys Thr Glu Lys Ala  
 850 855 860  
 Gln Glu Lys Lys Ser Ser Lys Ile Gly Gln Ser Asp Ala Lys Ser Val  
 865 870 875 880  
 Glu Leu Ser Arg Asp Pro Ser Leu Glu Ile Lys Glu Thr Val Val Glu  
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Asp Ser His Ser Tyr Leu Ser Glu Lys Gln Val Asp Ala Leu Pro Ala  
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Val Ala Ser Val Asp Asp Phe Lys Asp Ile Lys Glu Leu His Ser Leu  
915 920 925

Pro Ser Glu Glu Thr Ala Arg Val Lys Asn Arg Pro Asn Glu Ile Ile  
930 935 940

Ala Glu Lys Val Gln Asp Gln Thr Lys Ile Asp Asp Gln Glu Thr Val  
945 950 955 960

Lys Asn Thr Ser Val Ser Glu Asp Lys Gln Ile Thr Thr Lys His Tyr  
965 970 975

Ser Glu Asp Val Gly Glu Val Gln Ala Ser Gln Glu Lys Pro Val Ser  
980 985 990

Pro Lys Lys Ser Val Thr Phe Ser Glu Thr Asn Met Glu Glu Lys Tyr  
995 1000 1005

Tyr Phe Ser Pro Ala Val Ser Glu Ile Asp Ile Ser Thr Pro Pro  
1010 1015 1020

Ala Thr Glu Ala Asp His Ser Arg Lys Lys Trp Asn Ser Glu Glu  
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Phe Gly Arg Lys Lys  
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<212> DNA

<213> Arabidopsis thaliana

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tga						1983

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&lt;211&gt; 660

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2434

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Gly Lys Pro Ser Val Gly Pro Val Tyr Arg Asn Leu Leu Ser Glu Lys  
 20 25 30

Gly Phe Pro Pro Ile Asp Ser Glu Ile Thr Thr Ala Trp Asp Ile Phe  
 35 40 45

Ser Lys Ser Val Glu Lys Phe Pro Asp Asn Asn Met Leu Gly Trp Arg  
 50 55 60

Arg Ile Val Asp Glu Lys Val Gly Pro Tyr Met Trp Lys Thr Tyr Lys  
 65 70 75 80

Glu Val Tyr Glu Glu Val Leu Gln Ile Gly Ser Ala Leu Arg Ala Ala  
 85 90 95

Gly Ala Glu Pro Gly Ser Arg Val Gly Ile Tyr Gly Val Asn Cys Pro  
 100 105 110

Gln Trp Ile Ile Ala Met Glu Ala Cys Ala Ala His Thr Leu Ile Cys  
 115 120 125

Val Pro Leu Tyr Asp Thr Leu Gly Ser Gly Ala Val Asp Tyr Ile Val  
 130 135 140

Glu His Ala Glu Ile Asp Phe Val Phe Val Gln Asp Thr Lys Ile Lys  
 145 150 155 160

Gly Leu Leu Glu Pro Asp Cys Lys Cys Ala Lys Arg Leu Lys Ala Ile  
 165 170 175

Val Ser Phe Thr Asn Val Ser Asp Glu Leu Ser His Lys Ala Ser Glu  
 180 185 190

Ile Gly Val Lys Thr Tyr Ser Trp Ile Asp Phe Leu His Met Gly Arg  
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Glu Lys Pro Glu Asp Thr Asn Pro Pro Lys Ala Phe Asn Ile Cys Thr  
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 260 265 270  
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 Arg Lys Gly Ala Ser Val Gly Tyr Tyr His Gly Asn Leu Asn Val Leu  
 290 295 300  
 Arg Asp Asp Ile Gln Glu Leu Lys Pro Thr Tyr Leu Ala Gly Val Pro  
 305 310 315 320  
 Arg Val Phe Glu Arg Ile His Glu Gly Ile Gln Lys Ala Leu Gln Glu  
 325 330 335  
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 340 345 350  
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 355 360 365  
 Ala Asp Phe Ile Ala Phe Arg Lys Ile Arg Asp Lys Leu Gly Gly Arg  
 370 375 380  
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 Cys Met Leu Gly Thr Val Gly Ile Pro Ala Val Tyr Asn Glu Ile Arg  
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 Leu Glu Glu Val Ser Glu Met Gly Tyr Asp Pro Leu Gly Glu Asn Pro  
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Ala Gly Glu Ile Cys Ile Arg Gly Gln Cys Met Phe Ser Gly Tyr Tyr  
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Lys Asn Pro Glu Leu Thr Glu Glu Val Met Lys Asp Gly Trp Phe His  
 485 490 495

Thr Gly Asp Ile Gly Glu Ile Leu Pro Asn Gly Val Leu Lys Ile Ile  
 500 505 510

Asp Arg Lys Lys Asn Leu Ile Lys Leu Ser Gln Gly Glu Tyr Val Ala  
 515 520 525

Leu Glu His Leu Glu Asn Ile Phe Gly Gln Asn Ser Val Val Gln Asp  
 530 535 540

Ile Trp Val Tyr Gly Asp Ser Phe Lys Ser Met Leu Val Ala Val Val  
 545 550 555 560

Val Pro Asn Pro Glu Thr Val Asn Arg Trp Ala Lys Asp Leu Gly Phe  
 565 570 575

Thr Lys Pro Phe Glu Glu Leu Cys Ser Phe Pro Glu Leu Lys Glu His  
 580 585 590

Ile Ile Ser Glu Leu Lys Ser Thr Ala Glu Lys Asn Lys Leu Arg Lys  
 595 600 605

Phe Glu Tyr Ile Lys Ala Val Thr Val Glu Thr Lys Pro Phe Asp Val  
 610 615 620

Glu Arg Asp Leu Val Thr Ala Thr Leu Lys Asn Arg Arg Asn Asn Leu  
 625 630 635 640

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Ser Lys Lys Ile  
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<211> 174

<212> PRT

<213> Arabidopsis thaliana

<400> 2436

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Ser Pro Ser Lys Leu Pro Ser Pro Thr Ser Pro Ser Lys Lys Pro Leu  
 35 40 45

Lys Leu Arg Gln Val Ser Lys Gln Met Gly Ser Gln Asn Gln Gln Arg  
 50 55 60

Arg Gly Asn Lys Pro Ser Ile Ala Gln Ile Glu Arg Ala Phe Gly Ser  
 65 70 75 80

Gly Ser Tyr Arg Asp Ser Glu Gly Glu Met Asp Met Asn Thr Val Phe  
 85 90 95

Asp Glu Leu Leu Leu Gly His Ala Asn Lys Phe Glu Ser Lys Ile Glu  
 100 105 110

Lys Lys Leu Arg Glu Ile Gly Glu Ile Phe Val Ala Arg Thr Glu Pro  
 115 120 125



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Lys Leu Arg Ser Ser Gly Lys Pro Val Leu Met Phe Thr Ile Gln Trp  
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Ile Leu Pro Ile Trp Ile Met Ser Leu Leu Val Ala Cys Gly Val Ile  
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<211> 1416

<212> DNA

<213> Arabidopsis thaliana

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<211> 471

<212> PRT

<213> Arabidopsis thaliana

<400> 2438

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Gly Ile Glu Leu Ile Ala Ser Glu Asn Phe Thr Ser Phe Ala Val Ile  
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Glu Ala Leu Gly Ser Ala Leu Thr Asn Lys Tyr Ser Glu Gly Ile Pro  
50 55 60

Gly Asn Arg Tyr Tyr Gly Gly Asn Glu Phe Ile Asp Glu Ile Glu Asn  
65 70 75 80

Leu Cys Arg Ser Arg Ala Leu Glu Ala Phe His Cys Asp Pro Ala Ala  
85 90 95

Trp Gly Val Asn Val Gln Pro Tyr Ser Gly Ser Pro Ala Asn Phe Ala  
100 105 110

Ala Tyr Thr Ala Leu Leu Gln Pro His Asp Arg Ile Met Gly Leu Asp  
115 120 125

Leu Pro Ser Gly Gly His Leu Thr His Gly Tyr Tyr Thr Ser Gly Gly  
130 135 140

Lys Lys Ile Ser Ala Thr Ser Ile Tyr Phe Glu Ser Leu Pro Tyr Lys  
145 150 155 160

Val Asn Phe Thr Thr Gly Tyr Ile Asp Tyr Asp Lys Leu Glu Glu Lys  
 165 170 175  
 Ala Leu Asp Phe Arg Pro Lys Leu Leu Ile Cys Gly Gly Ser Ala Tyr  
 180 185 190  
 Pro Arg Asp Trp Asp Tyr Ala Arg Phe Arg Ala Ile Ala Asp Lys Val  
 195 200 205  
 Gly Ala Leu Leu Leu Cys Asp Met Ala His Ile Ser Gly Leu Val Ala  
 210 215 220  
 Ala Gln Glu Ala Ala Asn Pro Phe Glu Tyr Cys Asp Val Val Thr Thr  
 225 230 235 240  
 Thr Thr His Lys Ser Leu Arg Gly Pro Arg Ala Gly Met Ile Phe Tyr  
 245 250 255  
 Arg Lys Gly Pro Lys Pro Pro Lys Lys Gly Gln Pro Glu Gly Ala Val  
 260 265 270  
 Tyr Asp Phe Glu Asp Lys Ile Asn Phe Ala Val Phe Pro Ala Leu Gln  
 275 280 285  
 Gly Gly Pro His Asn His Gln Ile Gly Ala Leu Ala Val Ala Leu Lys  
 290 295 300  
 Gln Ala Asn Thr Pro Gly Phe Lys Val Tyr Ala Lys Gln Val Lys Ala  
 305 310 315 320  
 Asn Ala Val Ala Leu Gly Asn Tyr Leu Met Ser Lys Gly Tyr Gln Ile  
 325 330 335  
 Val Thr Asn Gly Thr Glu Asn His Leu Val Leu Trp Asp Leu Arg Pro  
 340 345 350  
 Leu Gly Leu Thr Gly Asn Lys Val Glu Lys Leu Cys Asp Leu Cys Ser  
 355 360 365  
 Ile Thr Leu Asn Lys Asn Ala Val Phe Gly Asp Ser Ser Ala Leu Ala  
 370 375 380  
 Pro Gly Gly Val Arg Ile Gly Ala Pro Ala Met Thr Ser Arg Gly Leu  
 385 390 395 400  
 Val Glu Lys Asp Phe Glu Gln Ile Gly Glu Phe Leu Ser Arg Ala Val  
 405 410 415

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Thr Leu Thr Leu Asp Ile Gln Lys Thr Tyr Gly Lys Leu Lys Asp  
420 425 430

Phe Asn Lys Gly Leu Val Asn Asn Lys Asp Leu Asp Gln Leu Lys Ala  
435 440 445

Asp Val Glu Lys Phe Ser Ala Ser Tyr Glu Met Pro Gly Phe Leu Met  
450 455 460

Ser Glu Met Lys Tyr Lys Asp  
465 470

<210> 2439

<211> 807

<212> DNA

<213> Arabidopsis thaliana

<400> 2439  
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gaggatgaga caaaagtgt agttaacgaa gcagagagaa gaactgaaga agagataatg 600  
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tacatgggac ccgtctctca cattgataat tttagtcagt tcgatcatct tcatcaacct 720  
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<210> 2440

<211> 268

<212> PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2440

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 Ser Lys Pro Cys Pro Val Ser Ile Ile Pro Glu Val Asp Ile Tyr Lys  
 35 40 45  
 Phe Asp Pro Trp Gln Leu Pro Glu Lys Thr Glu Phe Gly Glu Asn Glu  
 50 55 60  
 Trp Tyr Phe Phe Ser Pro Arg Glu Arg Lys Tyr Pro Asn Gly Val Arg  
 65 70 75 80  
 Pro Asn Arg Ala Ala Val Ser Gly Tyr Trp Lys Ala Thr Gly Thr Asp  
 85 90 95  
 Lys Ala Ile His Ser Gly Ser Ser Asn Val Gly Val Lys Lys Ala Leu  
 100 105 110  
 Val Phe Tyr Lys Gly Arg Pro Pro Lys Gly Ile Lys Thr Asp Trp Ile  
 115 120 125  
 Met His Glu Tyr Arg Leu His Asp Ser Arg Lys Ala Ser Thr Lys Arg  
 130 135 140  
 Asn Gly Ser Met Arg Leu Asp Glu Trp Val Leu Cys Arg Ile Tyr Lys  
 145 150 155 160  
 Lys Arg Gly Ala Ser Lys Leu Leu Asn Glu Gln Glu Gly Phe Met Asp  
 165 170 175  
 Glu Val Leu Met Glu Asp Glu Thr Lys Val Val Val Asn Glu Ala Glu  
 180 185 190  
 Arg Arg Thr Glu Glu Glu Ile Met Met Met Thr Ser Met Lys Leu Pro  
 195 200 205  
 Arg Thr Cys Ser Leu Ala His Leu Leu Glu Met Asp Tyr Met Gly Pro  
 210 215 220  
 Val Ser His Ile Asp Asn Phe Ser Gln Phe Asp His Leu His Gln Pro  
 3463

225

230

235

240

Asp Ser Glu Ser Ser Trp Phe Gly Asp Leu Gln Phe Asn Gln Asp Glu  
 245 250 255

Ile Leu Asn His His Arg Gln Ala Met Phe Lys Phe  
 260 265

&lt;210&gt; 2441

&lt;211&gt; 1290

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2441

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ttagctcgat caatcgaatc cgacgagctc gtcgccgta aaatcatcga gaagaagaaa	180
acaatcgaat ccggtatgga accaagaata atcagagaga tcgatgcgat gcgtcgtctt	240
cgatcatcat caaacatact caagatccat gaagttatgg caaccaaact taagatctat	300
ctcgtaatgg aactcgcttc cgggtggtaa cttttctcaa aagtcctccg tcgtggacgt	360
cttcctgaat caacggcgcy tcgttacttt caacaactcg cctccgctct tcgtttctct	420
caccaagacg gtgtcgtcca ccgtgatgtg aaacctcaga atctactctt agatgagcaa	480
ggtaacctca aggtctctga ctttggttta tcagctttac cggagcatct acaaaacgga	540
ttgcttcaca cggcgtgtgg tactccggct tatacagctc cggaggttat ttcacggagg	600
ggatacgacg gagcaaaagc tgatgcgtgg tcttgtgggt tgattttggt tgttttattg	660
gttggcgatg ttccatttga tgattcgaat atcgtctcga tgtatcgga gattcatcgg	720
agagattatc ggtttccgag ctggatttcg aaacaagcta aatcgataat ctatcagatg	780
ttagatccga atccagtaac gaggatgagt attgaaacag tgatgaaac gaattgggtc	840
aagaagtctc tagagacttc tgagtttcat cgtaacgtct ttgattcggg agtagagatg	900
aaatcgagtg ttaattcgat tactgctttt gatttgatct cgttatcgtc gggattagat	960
ctttctggat tgtttgaggc taagaagaag aaggagagga gattcacggc gaaggtttcg	1020
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gttctttcat ggcacaatga catcatgtaa

&lt;210&gt; 2442

&lt;211&gt; 429

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2442

Met Glu Ser Leu Pro Gln Pro Gln Asn Gln Ser Ser Pro Ala Thr Thr  
1 5 10 15Pro Ala Lys Ile Leu Leu Gly Lys Tyr Glu Leu Gly Arg Arg Leu Gly  
20 25 30Ser Gly Ser Phe Ala Lys Val His Leu Ala Arg Ser Ile Glu Ser Asp  
35 40 45Glu Leu Val Ala Val Lys Ile Ile Glu Lys Lys Lys Thr Ile Glu Ser  
50 55 60Gly Met Glu Pro Arg Ile Ile Arg Glu Ile Asp Ala Met Arg Arg Leu  
65 70 75 80Arg His His Pro Asn Ile Leu Lys Ile His Glu Val Met Ala Thr Lys  
85 90 95Ser Lys Ile Tyr Leu Val Met Glu Leu Ala Ser Gly Gly Glu Leu Phe  
100 105 110Ser Lys Val Leu Arg Arg Gly Arg Leu Pro Glu Ser Thr Ala Arg Arg  
115 120 125Tyr Phe Gln Gln Leu Ala Ser Ala Leu Arg Phe Ser His Gln Asp Gly  
130 135 140Val Ala His Arg Asp Val Lys Pro Gln Asn Leu Leu Leu Asp Glu Gln  
145 150 155 160Gly Asn Leu Lys Val Ser Asp Phe Gly Leu Ser Ala Leu Pro Glu His  
165 170 175Leu Gln Asn Gly Leu Leu His Thr Ala Cys Gly Thr Pro Ala Tyr Thr  
180 185 190

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Ala Pro Glu Val Ile Ser Arg Arg Gly Tyr Asp Gly Ala Lys Ala Asp  
195 200 205

Ala Trp Ser Cys Gly Val Ile Leu Phe Val Leu Leu Val Gly Asp Val  
210 215 220

Pro Phe Asp Asp Ser Asn Ile Ala Ala Met Tyr Arg Lys Ile His Arg  
225 230 235 240

Arg Asp Tyr Arg Phe Pro Ser Trp Ile Ser Lys Gln Ala Lys Ser Ile  
245 250 255

Ile Tyr Gln Met Leu Asp Pro Asn Pro Val Thr Arg Met Ser Ile Glu  
260 265 270

Thr Val Met Lys Thr Asn Trp Phe Lys Lys Ser Leu Glu Thr Ser Glu  
275 280 285

Phe His Arg Asn Val Phe Asp Ser Glu Val Glu Met Lys Ser Ser Val  
290 295 300

Asn Ser Ile Thr Ala Phe Asp Leu Ile Ser Leu Ser Ser Gly Leu Asp  
305 310 315 320

Leu Ser Gly Leu Phe Glu Ala Lys Lys Lys Lys Glu Arg Arg Phe Thr  
325 330 335

Ala Lys Val Ser Gly Val Glu Val Glu Glu Lys Ala Lys Met Ile Gly  
340 345 350

Glu Lys Leu Gly Tyr Val Val Lys Lys Lys Met Met Lys Lys Glu Gly  
355 360 365

Glu Val Lys Val Val Gly Leu Gly Arg Gly Arg Thr Val Ile Val Val  
370 375 380

Glu Ala Val Glu Leu Thr Val Asp Val Val Val Glu Val Lys Val  
385 390 395 400

Val Glu Gly Glu Glu Asp Asp Ser Arg Trp Ser Asp Leu Ile Thr Glu  
405 410 415

Leu Glu Asp Ile Val Leu Ser Trp His Asn Asp Ile Met  
420 425

<210> 2443



&lt;211&gt; 1239

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2443

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gtcacgcttg atcctgatca cctctgtact ctaccaccg tcgctgttag tccttccttt      180
gatcgagatc gaatgtgggt caatggcaag gaaatctcgc tttctggaag taggtaccag      240
aattgcttga gggaaattcg aagtcgtgct gatgatgtag aagataaaga aaagggtatc      300
aagattgcga agaaagattg ggagaagctg catctgcaca ttgcttctca taacaacttc      360
cctactgctg ctggcttagc atcttctgct gctggttttg ctgcttagt ttttgccttt      420
gccaaagtta tgaatgtaaa tgaagatcca agccaacttt ctgctatagc aaggcaagggt      480
tcaggaaagt cttgccgtag tttatttggg ggatttgtca agtggaatat gggaaacaaa      540
gaagatggaa gtgacagtgt tgcagttcaa ctggtagatg ataagcactg ggatgatcct      600
gttatcatta ttgctgtggg tagttcacga cagaaggaaa caagcagcac ctcggggaatg      660
cgtgagagtg ttgagacaag tttgctttta cagcatagag caaagggaagt tgtcccagta      720
cggatttttc aaatggaaga agctataaag aatcgagatt tcacatcttt taaaaaattg      780
acgtgttcag acagtaatca gtttcatgct gtttgtatgg atacatctcc acccatattc      840
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aacaggaaag tagcagttag attgctgcag gggctgctct actgcttccc tcctaagcct     1020
gacacagaca tgaagagtta cgtactgggg gatacatcga tagtaaaaga ggcaggcttg     1080
gaaggagagc ttccacaagg aattaaagac aaaattggaa gtcaggatca aaagggtgaa     1140
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&lt;210&gt; 2444

&lt;211&gt; 412

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2444

047-E2F-PCT.ST25.txt

Met Ala Glu Glu Lys Trp Val Val Met Val Thr Ala Gln Thr Pro Thr  
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Asn Ile Ala Val Ile Lys Tyr Trp Gly Lys Arg Asp Glu Val Arg Ile  
20 25 30

Leu Pro Ile Asn Asp Ser Ile Ser Val Thr Leu Asp Pro Asp His Leu  
35 40 45

Cys Thr Leu Thr Thr Val Ala Val Ser Pro Ser Phe Asp Arg Asp Arg  
50 55 60

Met Trp Leu Asn Gly Lys Glu Ile Ser Leu Ser Gly Ser Arg Tyr Gln  
65 70 75 80

Asn Cys Leu Arg Glu Ile Arg Ser Arg Ala Asp Asp Val Glu Asp Lys  
85 90 95

Glu Lys Gly Ile Lys Ile Ala Lys Lys Asp Trp Glu Lys Leu His Leu  
100 105 110

His Ile Ala Ser His Asn Asn Phe Pro Thr Ala Ala Gly Leu Ala Ser  
115 120 125

Ser Ala Ala Gly Phe Ala Cys Leu Val Phe Ala Leu Ala Lys Leu Met  
130 135 140

Asn Val Asn Glu Asp Pro Ser Gln Leu Ser Ala Ile Ala Arg Gln Gly  
145 150 155 160

Ser Gly Ser Ala Cys Arg Ser Leu Phe Gly Gly Phe Val Lys Trp Asn  
165 170 175

Met Gly Asn Lys Glu Asp Gly Ser Asp Ser Val Ala Val Gln Leu Val  
180 185 190

Asp Asp Lys His Trp Asp Asp Leu Val Ile Ile Ile Ala Val Val Ser  
195 200 205

Ser Arg Gln Lys Glu Thr Ser Ser Thr Ser Gly Met Arg Glu Ser Val  
210 215 220

Glu Thr Ser Leu Leu Leu Gln His Arg Ala Lys Glu Val Val Pro Val  
225 230 235 240

Arg Ile Leu Gln Met Glu Glu Ala Ile Lys Asn Arg Asp Phe Thr Ser  
245 250 255

Phe Thr Lys Leu Thr Cys Ser Asp Ser Asn Gln Phe His Ala Val Cys  
260 265 270

Met Asp Thr Ser Pro Pro Ile Phe Tyr Met Asn Asp Thr Ser His Arg  
275 280 285

Ile Ile Ser Leu Val Glu Lys Trp Asn Arg Ser Ala Gly Thr Pro Glu  
290 295 300

Ile Ala Tyr Thr Phe Asp Ala Gly Pro Asn Ala Val Met Ile Ala Arg  
305 310 315 320

Asn Arg Lys Val Ala Val Glu Leu Leu Gln Gly Leu Leu Tyr Cys Phe  
325 330 335

Pro Pro Lys Pro Asp Thr Asp Met Lys Ser Tyr Val Leu Gly Asp Thr  
340 345 350

Ser Ile Val Lys Glu Ala Gly Leu Glu Gly Glu Leu Pro Gln Gly Ile  
355 360 365

Lys Asp Lys Ile Gly Ser Gln Asp Gln Lys Gly Glu Val Ser Tyr Phe  
370 375 380

Ile Cys Ser Arg Pro Gly Arg Gly Pro Val Val Leu Gln Asp Gln Thr  
385 390 395 400

Gln Ala Leu Leu His Pro Gln Thr Gly Leu Pro Lys  
405 410

<210> 2445

<211> 1053

<212> DNA

<213> Arabidopsis thaliana

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atctccacgt ttcttcacga gaaaggctgg agaccgaaag agccccgat cgagtatggt 180  
ggttactggt ggctaccgtc tctctcgaa ggttgatttc acgcgcaaga gttctttcaa 240  
gcacgacca gtgacttcct cgtctgtagc taccacaaga caggcaccac ttggctcaaa 300

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gccctgactt tcgccatcgc aaatcgttcc cgcttcgatg attccctcaa cctctcctg 360
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tcgaactatc tgactccgga gatggctgct cgtatagatg ggtaaatgga agagaaattt 1020
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&lt;210&gt; 2446

&lt;211&gt; 350

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2446

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Met Glu Ser Glu Thr Leu Thr Ala Lys Ala Thr Ile Thr Thr Thr Thr
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Leu Pro Ser His Asp Glu Thr Lys Thr Glu Ser Thr Glu Phe Glu Lys
20           25           30

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Asn Gln Lys Arg Tyr Gln Asp Leu Ile Ser Thr Phe Pro His Glu Lys
35           40           45

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```

Gly Trp Arg Pro Lys Glu Pro Leu Ile Glu Tyr Gly Gly Tyr Trp Trp
50           55           60

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```

Leu Pro Ser Leu Leu Glu Gly Cys Ile His Ala Gln Glu Phe Phe Gln
65           70           75           80

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Ala Arg Pro Ser Asp Phe Leu Val Cys Ser Tyr Pro Lys Thr Gly Thr
85           90           95

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Thr Trp Leu Lys Ala Leu Thr Phe Ala Ile Ala Asn Arg Ser Arg Phe  
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 115 120 125  
 Pro Tyr Ile Glu Ile Asp Phe Pro Phe Phe Pro Glu Val Asp Val Leu  
 130 135 140  
 Lys Asp Lys Gly Asn Thr Leu Phe Ser Thr His Ile Pro Tyr Glu Leu  
 145 150 155 160  
 Leu Pro Asp Ser Val Val Lys Ser Gly Cys Lys Met Val Tyr Ile Trp  
 165 170 175  
 Arg Glu Pro Lys Asp Thr Phe Ile Ser Met Trp Thr Phe Leu His Lys  
 180 185 190  
 Glu Arg Thr Glu Leu Gly Pro Val Ser Asn Leu Glu Glu Ser Phe Asp  
 195 200 205  
 Met Phe Cys Arg Gly Leu Ser Gly Tyr Gly Pro Tyr Leu Asn His Ile  
 210 215 220  
 Leu Ala Tyr Trp Lys Ala Tyr Gln Glu Asn Pro Asp Arg Ile Leu Phe  
 225 230 235 240  
 Leu Lys Tyr Glu Thr Met Arg Ala Asp Pro Leu Pro Tyr Val Lys Ser  
 245 250 255  
 Leu Ala Glu Phe Met Gly His Gly Phe Thr Ala Glu Glu Glu Lys  
 260 265 270  
 Gly Val Val Glu Lys Val Val Asn Leu Cys Ser Phe Glu Thr Leu Lys  
 275 280 285  
 Asn Leu Glu Ala Asn Lys Gly Glu Lys Asp Arg Glu Asp Arg Pro Gly  
 290 295 300  
 Val Tyr Ala Asn Ser Ala Tyr Phe Arg Lys Gly Lys Val Gly Asp Trp  
 305 310 315 320  
 Ser Asn Tyr Leu Thr Pro Glu Met Ala Ala Arg Ile Asp Gly Leu Met  
 325 330 335  
 Glu Glu Lys Phe Lys Gly Thr Gly Leu Leu Glu His Gly Lys  
 340 345 350

&lt;210&gt; 2447

&lt;211&gt; 1536

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2447

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tctgaactgg aagaggtagg tgaacaggat ttgttgaaaa ctttatccga tacgagaagc	240
gggtcttcca atgtttttga tgaagacgat gtattgtctg ttgtggagga taatagtgt	300
gtcataagtg agggcttgtt agttgttgat gcaggctctg aattaagctt gtctaataca	360
gctatggaaa tagataacgg gcgagttctt gcaaccgcga ttatcgtagg cgaatcaagc	420
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tcggagggtg tcattagatt gccagatgaa aatagtaatc atctggtgaa agggagaagt	540
gtttatgaac tagattgtat accgctttgg ggcacgggtt ccattcaagg gaatagatct	600
gagatggagg atgcttttgc cgtgtcacct cattttctga aactacccat caaaatgctt	660
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caagaagtct gcgaaatagc aaggagacgg atattgatgt ggcacaagaa gaacggtgca	1380
ccgcctctag cagagagagg caaaggaata gatccagctt gccaaagcgc agctgactac	1440
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ttgaaagctc aaagaaagtt caagaccaga acctga	1536

&lt;210&gt; 2448

&lt;211&gt; 511

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2448

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20 25 30Val Thr Asp Ala Ala Asp Leu Leu Ser Asp Ser Glu Asn Gln Ser Phe  
35 40 45Cys Asn Gly Gly Thr Glu Cys Thr Met Glu Asp Val Ser Glu Leu Glu  
50 55 60Glu Val Gly Glu Gln Asp Leu Leu Lys Thr Leu Ser Asp Thr Arg Ser  
65 70 75 80Gly Ser Ser Asn Val Phe Asp Glu Asp Asp Val Leu Ser Val Val Glu  
85 90 95Asp Asn Ser Ala Val Ile Ser Glu Gly Leu Leu Val Val Asp Ala Gly  
100 105 110Ser Glu Leu Ser Leu Ser Asn Thr Ala Met Glu Ile Asp Asn Gly Arg  
115 120 125Val Leu Ala Thr Ala Ile Ile Val Gly Glu Ser Ser Ile Glu Gln Val  
130 135 140Pro Thr Ala Glu Val Leu Ile Ala Gly Val Asn Gln Asp Thr Asn Thr  
145 150 155 160Ser Glu Val Val Ile Arg Leu Pro Asp Glu Asn Ser Asn His Leu Val  
165 170 175Lys Gly Arg Ser Val Tyr Glu Leu Asp Cys Ile Pro Leu Trp Gly Thr  
180 185 190Val Ser Ile Gln Gly Asn Arg Ser Glu Met Glu Asp Ala Phe Ala Val  
Page 3473

195  
 Ser Pro His Phe Leu Lys Leu Pro Ile Lys Met Leu Met Gly Asp His  
 210 215  
 Glu Gly Met Ser Pro Ser Leu Thr His Leu Thr Gly His Phe Phe Gly  
 225 230 235  
 Val Tyr Asp Gly His Gly Gly His Lys Val Ala Asp Tyr Cys Arg Asp  
 245 250 255  
 Arg Leu His Phe Ala Leu Ala Glu Glu Ile Glu Arg Ile Lys Asp Glu  
 260 265 270  
 Leu Cys Lys Arg Asn Thr Gly Glu Gly Arg Gln Val Gln Trp Asp Lys  
 275 280 285  
 Val Phe Thr Ser Cys Phe Leu Thr Val Asp Gly Glu Ile Glu Gly Lys  
 290 295 300  
 Ile Gly Arg Ala Val Val Gly Ser Ser Asp Lys Val Leu Glu Ala Val  
 305 310 315 320  
 Ala Ser Glu Thr Val Gly Ser Thr Ala Val Val Ala Leu Val Cys Ser  
 325 330 335  
 Ser His Ile Val Val Ser Asn Cys Gly Asp Ser Arg Ala Val Leu Phe  
 340 345 350  
 Arg Gly Lys Glu Ala Met Pro Leu Ser Val Asp His Lys Pro Asp Arg  
 355 360 365  
 Glu Asp Glu Tyr Ala Arg Ile Glu Asn Ala Gly Gly Lys Val Ile Gln  
 370 375 380  
 Trp Gln Gly Ala Arg Val Phe Gly Val Leu Ala Met Ser Arg Ser Ile  
 385 390 395 400  
 Gly Asp Arg Tyr Leu Lys Pro Tyr Val Ile Pro Glu Pro Glu Val Thr  
 405 410 415  
 Phe Met Pro Arg Ser Arg Glu Asp Glu Cys Leu Ile Leu Ala Ser Asp  
 420 425 430  
 Gly Leu Trp Asp Val Met Asn Asn Gln Glu Val Cys Glu Ile Ala Arg  
 435 440 445



Arg Arg Ile Leu Met Trp His Lys Lys Asn Gly Ala Pro Pro Leu Ala  
 450 455 460

Glu Arg Gly Lys Gly Ile Asp Pro Ala Cys Gln Ala Ala Ala Asp Tyr  
 465 470 475 480

Leu Ser Met Leu Ala Leu Gln Lys Gly Ser Lys Asp Asn Ile Ser Ile  
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 500 505 510

<210> 2449

<211> 912

<212> DNA

<213> Arabidopsis thaliana

<400> 2449  
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 tgcggtcgat acttctgctt caaccaaacc gtcaacacag aagaagaagc tctcaagcta 780  
 gtggagagtt tgtctccttt gattcctatg ccaccgaggt atgagaatga gatgcacgga 840  
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<210> 2450

<211> 303

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2450

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35 40 45Met Ile Arg Glu Met Glu Thr Thr Glu Glu Arg Leu Val Val Tyr Asp  
50 55 60Val Asp Val Leu Asp Tyr Gln Ser Ile Leu Val Ser Leu Lys Thr Cys  
65 70 75 80Asn Val Val Phe Cys Cys Leu Asp Ser Pro Glu Gly Tyr Asp Glu Lys  
85 90 95Glu Val Asp Leu Glu Val Arg Gly Ala Ile Asn Val Val Glu Ala Cys  
100 105 110Gly Arg Thr Glu Ser Ile Glu Lys Ile Val Phe Ser Ser Ser Leu Thr  
115 120 125Ala Ser Ile Trp Arg Asp Asn Ile Gly Thr Gln Lys Asp Val Asp Glu  
130 135 140Lys Cys Trp Ser Asp Gln Asp Phe Cys Arg Ser Lys Lys Leu Trp His  
145 150 155 160Ala Leu Ala Lys Met Leu Ser Glu Lys Ala Ala Trp Ala Leu Ala Met  
165 170 175Asp Arg Arg Leu Asn Met Val Ser Ile Asn Pro Gly Leu Val Val Gly  
180 185 190Pro Ser Val Ala Gln His Asn Ala Arg Pro Thr Met Ser Tyr Leu Lys  
195 200 205Gly Ala Ala Gln Met Tyr Glu Asn Gly Val Leu Ala Tyr Val Asp Val  
210 215 220

Lys Phe Leu Ala Asp Val His Ile Arg Ala Phe Glu Asp Val Ser Ala  
 225 230 235 240

Cys Gly Arg Tyr Phe Cys Phe Asn Gln Ile Val Asn Thr Glu Glu Glu  
 245 250 255

Ala Leu Lys Leu Val Glu Ser Leu Ser Pro Leu Ile Pro Met Pro Pro  
 260 265 270

Arg Tyr Glu Asn Glu Met His Gly Ser Glu Val Tyr Glu Glu Arg Leu  
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 290 295 300

<210> 2451

<211> 1149

<212> DNA

<213> Arabidopsis thaliana

<400> 2451  
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 gcagatatag cagctgcaaa gtgtgccatt gatcttaaaa taccagaagc cattgaaaac 180  
 catccttctt cacagccgt aacactagcc gaactctctt ccgccgtctc cgctctctcc 240  
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atcggaagg tggtagatg ggaatcggg atcgagaga ataaaaagac gatgatagtg 960  
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<210> 2452

<211> 382

<212> PRT

<213> Arabidopsis thaliana

<400> 2452

Met Ser Ser Asp Gln Leu Ser Lys Phe Leu Asp Arg Asn Lys Met Glu  
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Ile Trp Lys Tyr Val Phe Gly Phe Ala Asp Ile Ala Ala Lys Cys  
35 40 45  
Ala Ile Asp Leu Lys Ile Pro Glu Ala Ile Glu Asn His Pro Ser Ser  
50 55 60  
Gln Pro Val Thr Leu Ala Glu Leu Ser Ser Ala Val Ser Ala Ser Pro  
65 70 75 80  
Ser His Leu Arg Arg Ile Met Arg Phe Leu Val His Gln Gly Ile Phe  
85 90 95  
Lys Glu Ile Pro Thr Lys Asp Gly Leu Ala Thr Gly Tyr Val Asn Thr  
100 105 110  
Pro Leu Ser Arg Arg Leu Met Ile Thr Arg Arg Asp Gly Lys Ser Leu  
115 120 125  
Ala Pro Phe Val Leu Phe Glu Thr Thr Pro Glu Met Leu Ala Pro Trp  
130 135 140  
Leu Arg Leu Ser Ser Val Val Ser Ser Pro Val Asn Gly Ser Thr Pro  
145 150 155 160

047-E2F-PCT.ST25.txt

Pro Pro Phe Asp Ala Val His Gly Lys Asp Val Trp Ser Phe Ala Gln  
165 170 175

Asp Asn Pro Phe Leu Ser Asp Met Ile Asn Glu Ala Met Ala Cys Asp  
180 185 190

Ala Arg Arg Val Val Pro Arg Val Ala Gly Ala Cys His Gly Leu Phe  
195 200 205

Asp Gly Val Thr Thr Met Val Asp Val Gly Gly Gly Thr Gly Glu Thr  
210 215 220

Met Gly Met Leu Val Lys Glu Phe Pro Trp Ile Lys Gly Phe Asn Phe  
225 230 235 240

Asp Leu Pro His Val Ile Glu Val Ala Glu Val Leu Asp Gly Val Glu  
245 250 255

Asn Val Glu Gly Asp Met Phe Asp Ser Ile Pro Ala Cys Asp Ala Ile  
260 265 270

Phe Ile Lys Trp Val Leu His Asp Trp Gly Asp Lys Asp Cys Ile Lys  
275 280 285

Ile Leu Lys Asn Cys Lys Glu Ala Val Pro Pro Asn Ile Gly Lys Val  
290 295 300

Leu Ile Val Glu Ser Val Ile Gly Glu Asn Lys Lys Thr Met Ile Val  
305 310 315 320

Asp Glu Arg Asp Glu Lys Leu Glu His Val Arg Leu Met Leu Asp Met  
325 330 335

Val Met Met Ala His Thr Ser Thr Gly Lys Glu Arg Thr Leu Lys Glu  
340 345 350

Trp Asp Phe Val Leu Lys Glu Ala Gly Phe Ala Arg Tyr Glu Val Arg  
355 360 365

Asp Ile Asp Asp Val Gln Ser Leu Ile Ile Ala Tyr Arg Ser  
370 375 380

<210> 2453

<211> 1287

<212> DNA

<213> Arabidopsis thaliana

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cgttccctct cccttcgcag actcaatcac tccaacgcca ccgcgcgac tccgcgcgtc    180
tctgtccagg aagtgtgcaa ggagaagcaa tccaccaata ataccagcct gttgataacc    240
aaagaggaag gattggagtt gtatgaagat atgatactag gtagatcttt cgaagacatg    300
tgtgtcctaa tgtattaccg aggcaagatg tttggttttg ttcacttgta caatggccaa    360
gaggctgttt ctactggctt tatcaagctc cttaccaagt ctgactctgt cgttagtacc    420
taccgtgacc atgtccatgc cctcagcaaa ggtgtctctg ctcgctgtgt tatgagcgag    480
ctcttcggca aggttactgg atgctgcaga ggccaagggt gatccatgca catgttctcc    540
aaagaacaca acatgcttgg tggccttgct tttattggtg aaggcattcc tgtcgccact    600
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actgtgcctt ttttcggaga tggaaactgt aacaacggac agttcttcga gtgtctcaac    720
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<210> 2454

<211> 428

<212> PRT

<213> Arabidopsis thaliana

<400> 2454

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His Gly Ser His Glu Asn Arg Leu Leu Leu Pro Ile Arg Leu Ala Pro  
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 Pro Ser Ser Phe Leu Gly Ser Thr Arg Ser Leu Ser Leu Arg Arg Leu  
 35 40 45  
 Asn His Ser Asn Ala Thr Arg Arg Ser Pro Val Val Ser Val Gln Glu  
 50 55 60  
 Val Val Lys Glu Lys Gln Ser Thr Asn Asn Thr Ser Leu Leu Ile Thr  
 65 70 75 80  
 Lys Glu Glu Gly Leu Glu Leu Tyr Glu Asp Met Ile Leu Gly Arg Ser  
 85 90 95  
 Phe Glu Asp Met Cys Ala Gln Met Tyr Tyr Arg Gly Lys Met Phe Gly  
 100 105 110  
 Phe Val His Leu Tyr Asn Gly Gln Glu Ala Val Ser Thr Gly Phe Ile  
 115 120 125  
 Lys Leu Leu Thr Lys Ser Asp Ser Val Val Ser Thr Tyr Arg Asp His  
 130 135 140  
 Val His Ala Leu Ser Lys Gly Val Ser Ala Arg Ala Val Met Ser Glu  
 145 150 155 160  
 Leu Phe Gly Lys Val Thr Gly Cys Cys Arg Gly Gln Gly Gly Ser Met  
 165 170 175  
 His Met Phe Ser Lys Glu His Asn Met Leu Gly Gly Phe Ala Phe Ile  
 180 185 190  
 Gly Glu Gly Ile Pro Val Ala Thr Gly Ala Ala Phe Ser Ser Lys Tyr  
 195 200 205  
 Arg Arg Glu Val Leu Lys Gln Asp Cys Asp Asp Val Thr Val Ala Phe  
 210 215 220  
 Phe Gly Asp Gly Thr Cys Asn Asn Gly Gln Phe Phe Glu Cys Leu Asn  
 225 230 235 240  
 Met Ala Ala Leu Tyr Lys Leu Pro Ile Ile Phe Val Val Glu Asn Asn  
 245 250 255  
 Leu Trp Ala Ile Gly Met Ser His Leu Arg Ala Thr Ser Asp Pro Glu

260

Ile Trp Lys Lys Gly Pro Ala Phe Gly Met Pro Gly Val His Val Asp  
275 280

Gly Met Asp Val Leu Lys Val Arg Glu Val Ala Lys Glu Ala Val Thr  
290 295 300

Arg Ala Arg Arg Gly Glu Gly Pro Thr Leu Val Glu Cys Glu Thr Tyr  
305 310 315 320

Arg Phe Arg Gly His Ser Leu Ala Asp Pro Asp Glu Leu Arg Asp Ala  
325 330 335

Ala Glu Lys Ala Lys Tyr Ala Ala Arg Asp Pro Ile Ala Ala Leu Lys  
340 345 350

Lys Tyr Leu Ile Glu Asn Lys Leu Ala Lys Glu Ala Glu Leu Lys Ser  
355 360 365

Ile Glu Lys Lys Ile Asp Glu Leu Val Glu Glu Ala Val Glu Phe Ala  
370 375 380

Asp Ala Ser Pro Gln Pro Gly Arg Ser Gln Leu Leu Glu Asn Val Phe  
385 390 395 400

Ala Asp Pro Lys Gly Phe Gly Ile Gly Pro Asp Gly Arg Tyr Arg Cys  
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Glu Asp Pro Lys Phe Thr Glu Gly Thr Ala Gln Val  
420 425

<210> 2455

<211> 801

<212> DNA

<213> Arabidopsis thaliana

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accgtcaagt ctactctca gagcatctgg tacggaccag accgtcccaa atacctagga 180

ccattttccg aaaacacacc atcacaccta accggagaat accctggaga ctacgggttg 240

gacaccgctg gtctctcagc cgatccagaa acattcgcaa agaatcgtga gctcgaagt 300



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aacttcgtcc ccggaataa g 801

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&lt;210&gt; 2456

&lt;211&gt; 266

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2456

```

Met Ala Thr Ser Ala Ile Gln His Ser Ser Phe Ala Gly Gln Thr Thr
1 5 10 15

```

```

Leu Lys Pro Ser Asn Asp Leu Leu Arg Lys Ile Gly Ala Ser Asn Gly
20 25 30

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```

Gly Gly Arg Ile Ile Met Arg Arg Thr Val Lys Ser Thr Pro Gln Ser
35 40 45

```

```

Ile Trp Tyr Gly Pro Asp Arg Pro Lys Tyr Leu Gly Pro Phe Ser Glu
50 55 60

```

```

Asn Thr Pro Ser Tyr Leu Thr Gly Glu Tyr Pro Gly Asp Tyr Gly Trp
65 70 75 80

```

```

Asp Thr Ala Gly Leu Ser Ala Asp Pro Glu Thr Phe Ala Lys Asn Arg
85 90 95

```

```

Glu Leu Glu Val Ile His Ser Arg Trp Ala Met Leu Gly Ala Leu Gly
100 105 110

```

```

Cys Thr Phe Pro Glu Ile Leu Ser Lys Asn Gly Val Lys Phe Gly Glu
115 120 125

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047-E2F-PCT.ST25.txt

Ala Val Trp Phe Lys Ala Gly Ser Gln Ile Phe Ser Glu Gly Gly Leu  
130 135 140

Asp Tyr Leu Gly Asn Pro Asn Leu Ile His Ala Gln Ser Ile Leu Ala  
145 150 155 160

Ile Trp Ala Cys Gln Val Val Leu Met Gly Phe Ile Glu Gly Tyr Arg  
165 170 175

Ile Gly Gly Gly Pro Leu Gly Glu Gly Leu Asp Pro Leu Tyr Pro Gly  
180 185 190

Gly Ala Phe Asp Pro Leu Asn Leu Ala Glu Asp Pro Glu Ala Phe Ser  
195 200 205

Glu Leu Lys Val Lys Glu Leu Lys Asn Gly Arg Leu Ala Met Phe Ser  
210 215 220

Met Phe Gly Phe Phe Val Gln Ala Ile Val Thr Gly Lys Gly Pro Ile  
225 230 235 240

Glu Asn Leu Phe Asp His Ile Ala Asp Pro Val Ala Asn Asn Ala Trp  
245 250 255

Ala Tyr Ala Thr Asn Phe Val Pro Gly Lys  
260 265

<210> 2457

<211> 1509

<212> DNA

<213> Arabidopsis thaliana

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gtggaggaaa gaactaagga agacagagaa aaatggtgga aaatgggatt aaaagctatc 360  
tacgaaggca aattgggtgt ggtgctttaa tctggtggac agggaaacaag acttgggaagt 420  
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tcctcttaa 1509

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<210> 2458

<211> 502

<212> PRT

<213> Arabidopsis thaliana

<400> 2458

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Met Lys Glu Pro Thr Thr Glu Ile Glu Ile Glu Thr Ser Ala Val Ala
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```

```

Thr Ile Leu Pro Pro Pro Leu Pro Pro Thr Ala Ser Pro His Gln Ala
20           25           30

```

```

Leu Val Glu Arg Leu Lys Asp Tyr Gly Gln Glu Asp Val Phe Ser Leu
35           40           45

```

```

Trp Asp Glu Leu Ser Pro Glu Glu Arg Asp Leu Leu Leu Arg Asp Ile
Page 3485

```

50

55

60

Glu Asn Leu Asp Leu Pro Arg Ile Asp Arg Ile Ile Arg Cys Ser Leu  
 65 70 75 80  
 His Ser Gln Gly Leu Pro Val Ala Ala Ile Glu Pro Val Pro Glu Asn  
 85 90 95  
 Cys Val Ser Thr Val Glu Glu Arg Thr Lys Glu Asp Arg Glu Lys Trp  
 100 105 110  
 Trp Lys Met Gly Leu Lys Ala Ile Tyr Glu Gly Lys Leu Gly Val Val  
 115 120 125  
 Leu Leu Ser Gly Gly Gln Gly Thr Arg Leu Gly Ser Ser Asp Pro Lys  
 130 135 140  
 Gly Cys Tyr Asn Ile Gly Leu Pro Ser Gly Lys Ser Leu Phe Gln Ile  
 145 150 155 160  
 Gln Ala Glu Arg Ile Leu Cys Val Gln Arg Leu Ala Ser Gln Ala Met  
 165 170 175  
 Ser Glu Ala Ser Pro Thr Arg Pro Val Thr Ile Gln Trp Tyr Ile Met  
 180 185 190  
 Thr Ser Pro Phe Thr His Glu Pro Thr Gln Lys Phe Phe Lys Ser His  
 195 200 205  
 Lys Tyr Phe Gly Leu Glu Pro Asp Gln Val Thr Phe Phe Gln Gln Gly  
 210 215 220  
 Thr Leu Pro Cys Ile Ser Lys Asp Gly Lys Phe Ile Met Glu Thr Pro  
 225 230 235 240  
 Phe Ser Leu Ser Lys Ala Pro Asp Gly Asn Gly Gly Val Tyr Thr Ala  
 245 250 255  
 Leu Lys Ser Ser Arg Leu Leu Glu Asp Met Ala Ser Arg Gly Ile Lys  
 260 265 270  
 Tyr Val Asp Cys Tyr Gly Val Asp Asn Val Leu Val Arg Val Ala Asp  
 275 280 285  
 Pro Thr Phe Leu Gly Tyr Phe Ile Asp Lys Ser Ala Ala Ser Ala Ala  
 290 295 300

047-E2F-PCT.ST25.txt

Lys Val Val Arg Lys Ala Tyr Pro Gln Glu Lys Val Gly Val Phe Val  
305 310 315 320

Arg Arg Gly Lys Gly Gly Pro Leu Thr Val Val Glu Tyr Thr Glu Leu  
325 330 335

Asp Gln Ser Met Ala Ser Ala Thr Asn Gln Gln Thr Gly Arg Leu Gln  
340 345 350

Tyr Cys Trp Ser Asn Val Cys Leu His Met Phe Thr Leu Asp Phe Leu  
355 360 365

Asn Gln Val Ala Asn Gly Leu Glu Lys Asp Ser Val Tyr His Leu Ala  
370 375 380

Glu Lys Lys Ile Pro Ser Ile Asn Gly Asp Ile Val Gly Leu Lys Leu  
385 390 395 400

Glu Gln Phe Ile Phe Asp Cys Phe Pro Tyr Ala Pro Ser Thr Ala Leu  
405 410 415

Phe Glu Val Leu Arg Glu Glu Glu Phe Ala Pro Val Lys Asn Ala Asn  
420 425 430

Gly Ser Asn Tyr Asp Thr Pro Glu Ser Ala Arg Leu Leu Val Leu Arg  
435 440 445

Leu His Thr Arg Trp Val Ile Ala Ala Gly Gly Phe Leu Thr His Ser  
450 455 460

Val Pro Leu Tyr Ala Thr Gly Val Glu Val Ser Pro Leu Cys Ser Tyr  
465 470 475 480

Ala Gly Glu Asn Leu Glu Ala Ile Cys Arg Gly Arg Thr Phe His Ala  
485 490 495

Pro Cys Glu Ile Ser Leu  
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<210> 2459

<211> 327

<212> DNA

<213> Arabidopsis thaliana

<400> 2459

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cctccagaga cactttcata cctcaacaa attgtgatca caggctactgg acttgtttgg      180
tcacgttaca gcaactgtaat tactccgaaa aactggaatc tctttagcgt gagtcttggg      240
atggctgtga cagggatata ccaacttact cgtaaaataa agcacgatta tgtatatgaa      300
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&lt;210&gt; 2460

&lt;211&gt; 108

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2460

```

Met Ala Thr Ser Lys Leu Gln Ala Leu Trp Asn His Pro Ala Gly Pro
1      5      10      15

```

```

Lys Thr Ile His Phe Trp Ala Pro Thr Phe Lys Trp Gly Ile Ser Ile
20      25      30

```

```

Ala Asn Ile Ala Asp Phe Gln Lys Pro Pro Glu Thr Leu Ser Tyr Pro
35      40      45

```

```

Gln Gln Ile Val Ile Thr Gly Thr Gly Leu Val Trp Ser Arg Tyr Ser
50      55      60

```

```

Thr Val Ile Thr Pro Lys Asn Trp Asn Leu Phe Ser Val Ser Leu Gly
65      70      75      80

```

```

Met Ala Val Thr Gly Ile Tyr Gln Leu Thr Arg Lys Ile Lys His Asp
85      90      95

```

```

Tyr Val Tyr Glu Ala Asn Ser Ile Val Ala Lys Glu
100     105

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&lt;210&gt; 2461

&lt;211&gt; 954

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

047-E2F-PCT.ST25.txt

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cttctcaaga cttctgacaa ggagctctct aacgatttcg agagagctat cttgttgtgg    240
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<210> 2462

<211> 317

<212> PRT

<213> Arabidopsis thaliana

<400> 2462

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20 25 30

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35 40 45

Ile Arg Gln Ala Tyr His Glu Thr Tyr Gly Glu Asp Leu Leu Lys Thr  
50 55 60

Leu Asp Lys Glu Leu Ser Asn Asp Phe Glu Arg Ala Ile Leu Leu Trp  
Page 3489

65                      70                      75                      80  
 Thr Leu Glu Pro Gly Glu Arg Asp Ala Leu Leu Ala Asn Glu Ala Thr  
                                  85                                   90                                   95  
 Lys Arg Trp Thr Ser Ser Asn Gln Val Leu Met Glu Val Ala Cys Thr  
                                  100                                   105                                   110  
 Arg Thr Ser Thr Gln Leu Leu His Ala Arg Gln Ala Tyr His Ala Arg  
                                  115                                   120                                   125  
 Tyr Lys Lys Ser Leu Glu Glu Asp Val Ala His His Thr Thr Gly Asp  
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 Phe Arg Lys Leu Leu Val Ser Leu Val Thr Ser Tyr Arg Tyr Glu Gly  
                                  145                                   150                                   155                                   160  
 Asp Glu Val Asn Met Thr Leu Ala Lys Gln Glu Ala Lys Leu Val His  
                                  165                                   170                                   175  
 Glu Lys Ile Lys Asp Lys His Tyr Asn Asp Glu Asp Val Ile Arg Ile  
                                  180                                   185                                   190  
 Leu Ser Thr Arg Ser Lys Ala Gln Ile Asn Ala Thr Phe Asn Arg Tyr  
                                  195                                   200                                   205  
 Gln Asp Asp His Gly Glu Glu Ile Leu Lys Ser Leu Glu Glu Gly Asp  
                                  210                                   215                                   220  
 Asp Asp Asp Lys Phe Leu Ala Leu Leu Arg Ser Thr Ile Gln Cys Leu  
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 Thr Arg Pro Glu Leu Tyr Phe Val Asp Val Leu Arg Ser Ala Ile Asn  
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 Lys Thr Gly Thr Asp Glu Gly Ala Leu Thr Arg Ile Val Thr Thr Arg  
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 Ser Ile Pro Leu Glu Lys Ala Ile Thr Lys Asp Thr Arg Gly Asp Tyr  
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&lt;210&gt; 2463

&lt;211&gt; 606

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2463

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&lt;210&gt; 2464

&lt;211&gt; 201

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2464

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20          25          30
Ile Leu Arg  Cys Leu Val Cys Val  Leu Ala Leu Val Ala Ala Ile Leu
35          40          45
Ile Ala Thr Asp Val Gln Val Arg Glu Ile Phe  Met Ile Gln Lys Lys
50          55          60
Ala Lys Phe Thr Asp Met Lys Ala Leu Val Leu Leu Val Val Val Asn

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65                      70                      75                      80  
 Gly Ile Ala Ala Gly Tyr Ser Leu Val Gln Ala Val Arg Cys Val Val  
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 Gly Leu Met Lys Gly Arg Val Leu Phe Ser Lys Pro Leu Ala Trp Ala  
                             100                              105                              110  
 Ile Phe Phe Gly Asp Gln Ala Val Ala Tyr Leu Cys Val Ala Gly Val  
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                             130                              135                              140  
 Leu Gln Trp Met Lys Ile Cys Asn Met Tyr Gly Lys Phe Cys Asn Gln  
                             145                              150                              155                              160  
 Val Gly Glu Gly Ile Ala Ser Ala Leu Phe Ala Cys Ile Gly Met Val  
                             165                              170                              175  
 Leu Ile Ser Cys Ile Ser Ala Phe Gly Val Phe Arg Leu Tyr Gly Gly  
                             180                              185                              190  
 Ser Lys Ser Arg Pro Ser Ser Arg Trp  
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&lt;210&gt; 2465

&lt;211&gt; 1719

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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ctagcttcat cgccaaacgt gctgcctttg tccctcgaca atgattcttc caattcaatc 720  
tggttagaga actggctcagc atcttgcttc tggaaaccag ttcctcagcc aaagaaagca 780  
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gcacaacat catctgagct tgagaaaccc aaacgcagct tccgcaaggt ttcaacaagc 960  
caatctgtag aaccactacc gtctatggac aatcctcaag ttgatctaga gaaagtga aa 1020  
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<211> 572

<212> PRT

<213> Arabidopsis thaliana

<400> 2466

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20 25 30

Lys Glu Val Val Val Ile Ser Lys Ile Glu Glu Ser Asp Val Val Ser  
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Asp Leu Ser Ser Ile Gly Asn Ala Ala Val Tyr Thr Ser Gly Ile Val  
 50 55 60  
 Glu Thr Gln Asn Leu Lys His Glu Asp Val Ser Asp Asp Glu Ile Gln  
 65 70 75  
 Val Ser Glu Val Gln Pro Thr Asp Ser Gln Asp Val Ala Ser Val Pro  
 85 90  
 Asp Asp Ser Leu Ser Glu Ser Glu Lys Ile Gln Gln Glu Ile Ala Ala  
 100 105 110  
 Val Thr Val Gln Ala Ala Tyr Arg Gly Tyr Leu Ala Arg Arg Ala Phe  
 115 120 125  
 Lys Ile Leu Lys Gly Ile Ile Arg Leu Gln Ala Leu Ile Arg Gly His  
 130 135 140  
 Met Val Arg Arg Gln Ala Val Ser Thr Leu Cys Cys Val Met Gly Ile  
 145 150 155 160  
 Val Arg Leu Gln Ala Leu Ala Arg Gly Arg Glu Ile Arg His Ser Asp  
 165 170 175  
 Ile Gly Val Glu Val Gln Arg Lys Cys His Leu His His Gln Pro Leu  
 180 185 190  
 Glu Asn Lys Ala Asn Ser Val Val Asp Thr His Ser Tyr Leu Gly Ile  
 195 200 205  
 Asn Lys Leu Thr Gly Asn Ala Phe Ala Gln Lys Leu Leu Ala Ser Ser  
 210 215 220  
 Pro Asn Val Leu Pro Leu Ser Leu Asp Asn Asp Ser Ser Asn Ser Ile  
 225 230 235 240  
 Trp Leu Glu Asn Trp Ser Ala Ser Cys Phe Trp Lys Pro Val Pro Gln  
 245 250 255  
 Pro Lys Lys Ala Ser Leu Arg Lys Ser Gln Lys Lys Phe Ala Ser Asn  
 260 265 270  
 Pro Gln Ile Val Glu Ala Glu Phe Ala Arg Pro Lys Lys Ser Val Arg  
 275 280

Lys Val Pro Ser Ser Asn Leu Asp Asn Ser Ser Val Ala Gln Thr Ser  
 290 295 300  
 Ser Glu Leu Glu Lys Pro Lys Arg Ser Phe Arg Lys Val Ser Thr Ser  
 305 310 315 320  
 Gln Ser Val Glu Pro Leu Pro Ser Met Asp Asn Pro Gln Val Asp Leu  
 325 330 335  
 Glu Lys Val Lys Arg Gly Leu Arg Lys Val His Asn Pro Val Val Glu  
 340 345 350  
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 385 390 395 400  
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 405 410 415  
 Asn Gln Ile Glu Glu Ser Glu Glu Asn Val Met Ala Glu Glu Lys Glu  
 420 425 430  
 Asp Val Lys Glu Glu Arg Thr Pro Lys Gln Asn His Lys Glu Asn Ser  
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 Ala Gly Lys Glu Asn Gln Lys Ser Gly Lys Lys Ala Ser Ser Val Thr  
 450 455 460  
 Ala Thr Gln Thr Ala Glu Phe Gln Glu Ser Gly Asn Gly Asn Gln Thr  
 465 470 475 480  
 Ser Ser Pro Gly Ile Pro Ser Tyr Met Gln Ala Thr Lys Ser Ala Lys  
 485 490 495  
 Ala Lys Leu Arg Leu Gln Gly Ser Ser Ser Pro Arg Gln Leu Gly Thr  
 500 505 510  
 Thr Glu Lys Ala Ser Arg Arg Tyr Ser Leu Pro Ser Ser Gly Asn Ser  
 515 520 525  
 Ala Lys Ile Thr Ser His Ser Pro Lys Thr Arg Val Ser Asn Ser Ser  
 530 535 540

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Gly Lys Ser Gly Asn Lys Thr Glu Lys Thr Leu Leu Ser Ser Arg Glu  
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Gly Asn Gly Lys Ala Thr Pro Val Glu Trp Lys Arg  
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<211> 1140

<212> DNA

<213> Arabidopsis thaliana

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 gaatcaatcg aagagttttt agatcgaccc acaagtcctg aaactgagcg aatcttatct 180  
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<210> 2468

<211> 379

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2468

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 20 25 30

Ser Ser Tyr Phe Ser Ser Phe Gly Glu Ser Ile Glu Glu Phe Leu Asp  
 35 40 45

Arg Pro Thr Ser Pro Glu Thr Glu Arg Ile Leu Ser Gly Phe Leu Gln  
 50 55 60

Thr Thr Asp Thr Ser Asp Asn Val Asp Ser Phe Leu His His Thr Phe  
 65 70 75 80

Asn Ser Asp Gly Thr Glu Lys Lys Pro Pro Glu Val Lys Thr Glu Asp  
 85 90 95

Glu Asp Ala Glu Ile Pro Val Thr Ala Thr Ala Thr Ala Met Glu Val  
 100 105 110

Val Val Ser Gly Asp Gly Glu Ile Ser Val Asn Pro Glu Val Ser Ile  
 115 120 125

Gly Tyr Val Ala Ser Val Ser Arg Asn Lys Arg Pro Arg Glu Lys Asp  
 130 135 140

Asp Arg Thr Pro Val Asn Asn Leu Ala Arg His Asn Ser Ser Pro Ala  
 145 150 155 160

Gly Leu Phe Ser Ser Ile Asp Val Glu Thr Ala Tyr Ala Ala Val Met  
 165 170 175

Lys Ser Met Gly Gly Phe Gly Gly Ser Asn Val Met Ser Thr Ser Asn  
 180 185 190

Thr Glu Ala Ser Ser Leu Thr Pro Arg Ser Lys Leu Leu Pro Pro Thr  
 195 200 205

Ser Arg Ala Met Ser Pro Ile Ser Glu Val Asp Val Lys Pro Gly Phe  
 210 215 220

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Ser Ser Arg Leu Pro Pro Arg Thr Leu Ser Gly Gly Phe Asn Arg Ser  
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 Thr Gln Ser Gly Gly Leu Asp Gln Tyr Lys Thr Lys Asp Glu Asp Ser  
 260 265 270  
 Ala Ser Arg Arg Pro Pro Leu Ala His His Met Ser Leu Pro Lys Ser  
 275 280 285  
 Leu Ser Asp Ile Glu Gln Leu Leu Ser Asp Ser Ile Pro Cys Lys Ile  
 290 295 300  
 Arg Ala Lys Arg Gly Cys Ala Thr His Pro Arg Ser Ile Ala Glu Arg  
 305 310 315 320  
 Val Arg Arg Thr Lys Ile Ser Glu Arg Met Arg Lys Leu Gln Asp Leu  
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 Val Pro Asn Met Asp Thr Gln Thr Asn Thr Ala Asp Met Leu Asp Leu  
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<210> 2469

<211> 1638

<212> DNA

<213> Arabidopsis thaliana

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 ctccgtgaca tgttgctga ttcagcacct gaacgacctg aatcggttaa agaacttctc 360  
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&lt;210&gt; 2470

&lt;211&gt; 545

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2470

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Met Phe Lys Pro Gln His Met Tyr Asp Arg Glu Phe Gly Thr Gly Asn
1           5           10           15

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Gly Tyr Ser Asn Gly Asn Gly Tyr Thr Asn Gly Asn Gly His Thr Asn
Page 3499

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 65 70 75 80  
 Lys Asn Leu Gln Asp Ser Pro Gln Asp Phe Pro Val Leu Ser Gln Val  
 85 90 95  
 Gln Pro Gly Tyr Leu Arg Asp Met Leu Pro Asp Ser Ala Pro Glu Arg  
 100 105 110  
 Pro Glu Ser Leu Lys Glu Leu Leu Asp Asp Val Ser Lys Lys Ile Met  
 115 120 125  
 Pro Gly Ile Thr His Trp Gln Ser Pro Ser Tyr Phe Ala Tyr Tyr Ala  
 130 135 140  
 Ser Ser Thr Ser Val Ala Gly Phe Leu Gly Glu Met Leu Asn Ala Gly  
 145 150 155 160  
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 195 200 205  
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 225 230 235 240  
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 260 265 270

Tyr Gly Met Pro Pro Glu Ser Leu Glu Glu Ala Ile Ser His Asp Leu  
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 Lys Tyr Gly Ile Trp Leu His Val Asp Ala Ala Tyr Ala Gly Asn Ala  
 325 330 335  
 Cys Ile Cys Pro Glu Tyr Arg Lys Phe Ile Asp Gly Ile Glu Asn Ala  
 340 345 350  
 Asp Ser Phe Asn Met Asn Ala His Lys Trp Leu Phe Ala Asn Gln Thr  
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 Cys Ser Pro Leu Trp Val Lys Asp Arg Tyr Ser Leu Ile Asp Ala Leu  
 370 375 380  
 Lys Thr Asn Pro Glu Tyr Leu Glu Phe Lys Val Ser Lys Lys Asp Thr  
 385 390 395 400  
 Val Val Asn Tyr Lys Asp Trp Gln Ile Ser Leu Ser Arg Arg Phe Arg  
 405 410 415  
 Ser Leu Lys Leu Trp Met Val Leu Arg Leu Tyr Gly Ser Glu Asn Leu  
 420 425 430  
 Arg Asn Phe Ile Arg Asp His Val Asn Leu Ala Lys His Phe Glu Asp  
 435 440 445  
 Tyr Val Ala Gln Asp Pro Ser Phe Glu Val Val Thr Thr Arg Tyr Phe  
 450 455 460  
 Ser Leu Val Cys Phe Arg Leu Ala Pro Val Asp Gly Asp Glu Asp Gln  
 465 470 475 480  
 Cys Asn Glu Arg Asn Arg Glu Leu Leu Ala Ala Val Asn Ser Thr Gly  
 485 490 495  
 Lys Ile Phe Ile Ser His Thr Ala Leu Ser Gly Lys Phe Val Leu Arg  
 500 505 510  
 Phe Ala Val Gly Ala Pro Leu Thr Glu Glu Lys His Val Thr Glu Ala  
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Trp Gln Ile Ile Gln Lys His Ala Ser Lys Phe Thr Arg Asn Asp His  
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Tyr  
545

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<211> 555

<212> DNA

<213> Arabidopsis thaliana

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tatatgggag tggctaagcc gtctcttatt gaagatgatg acgatgatgg aaggagcgta 300  
gatacagtaa aatcaaagtc tggctactta tacattccac ctgaggtgga agagattcgc 360  
gtcttcagggt tctcgggacc aaagtgtgtg aaactgcacc gtggtacatg gcattgctgga 420  
ccctgtttta gtggcagctc ctcatggat ttctacaact tagagctcag caacacaaat 480  
gtggtggatc acacgtcaca tgatttcacc aagaataatg gattcagctt cggatttgac 540  
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<210> 2472

<211> 184

<212> PRT

<213> Arabidopsis thaliana

<400> 2472

Met Ala Lys Ser Pro Val Glu Val Asn Leu Ile Pro Ile Glu Ala Thr  
1 5 10 15

Pro Glu Asn Phe Ala Glu Tyr Gly Gln Val Ile Glu Ala Ser Arg Asp  
20 25 30

Gly Ala Gly Phe Gly Pro His Asp Ala Gln Leu Asp Leu Ser Arg Gly  
35 40 45

Thr Pro Arg Leu Lys Glu Thr Pro Leu Gly Phe Phe Lys Ile Thr His  
 50 55 60  
 His Ala Lys Val Thr Gln Cys Leu Gly Ser Ile Gly Gly Asp Val Trp  
 65 70 75 80  
 Tyr Met Gly Val Ala Lys Pro Ser Leu Ile Glu Asp Asp Asp Asp Asp  
 85 90 95  
 Gly Arg Ser Val Asp Thr Val Lys Ser Lys Ser Gly His Leu Tyr Ile  
 100 105 110  
 Pro Pro Glu Val Glu Glu Ile Arg Val Phe Arg Phe Ser Gly Pro Lys  
 115 120 125  
 Phe Val Lys Leu His Arg Gly Thr Trp His Ala Gly Pro Leu Phe Ser  
 130 135 140  
 Gly Ser Ser Phe Met Asp Phe Tyr Asn Leu Glu Leu Ser Asn Thr Asn  
 145 150 155 160  
 Val Val Asp His Thr Ser His Asp Phe Thr Lys Asn Asn Gly Val Ser  
 165 170 175  
 Phe Gly Phe Asp Thr Leu Ser Ser  
 180

&lt;210&gt; 2473

&lt;211&gt; 855

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2473

atggggaaga taatggaatg ggcagcaaga tctgatcatt tgggaggaat tccaaggaat	60
actgtgataa tggctgttag tgcatttgca aaagcagtag caaatctttg caataaaagc	120
tcagttcaca atgcagatac tcttatgaat ctgtgccagt caagaccacc tgggtgttct	180
ctcatcactg ttagtaatca catgtcgact ttggatgac cagtaatgtg gggggcattt	240
aagggctccc ttctcttaga tccagaattg gctcgggtgg ttcttgctgc agagatatata	300
tgtttcagga accctatatt ctctacatt ttccgcactg gaaaatgtat acctataact	360
agaggtggtg gaattctacca agaaaacatg aatgaagctc tccagcgatt aaaagatgga	420

tcttggtgct atacctccc agagggaaaag gtgtttcaag atgatgttcc tataagacga 480  
 cttaaatggg gaactgcaag cctcatcgcc cgttccccag ttaccccaat cgttttgcca 540  
 ataattcacc gtgggtttga ggagatgatg ccggagaact acaataatgg acgaagacca 600  
 ctggtaccgt tgccgaacaa acaccttaaa gttgtggttg gtgaaccaat tgagtttgat 660  
 gttccaatga tggttgagac tgctgtcttg gactcccgcc atgtaacccc tcctcttcaa 720  
 gaagtgaat ggccgtgtcct cacttctgct ggccaagtgc tagacgaaac tgctcagaga 780  
 cacctctaca tagctctgtc cgagaagatt caatcctcct tggaaacatt gagactctta 840  
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<210> 2474

<211> 284

<212> PRT

<213> Arabidopsis thaliana

<400> 2474

Met Gly Lys Ile Met Glu Trp Ala Ala Arg Ser Asp His Leu Gly Gly  
 1 5 10 15

Ile Pro Arg Asn Thr Val Ile Met Ala Val Ser Ala Phe Ala Lys Ala  
 20 25 30

Val Ala Asn Leu Cys Asn Lys Ser Ser Val His Asn Ala Asp Thr Leu  
 35 40 45

Met Asn Leu Val Gln Ser Arg Pro Pro Gly Val Pro Leu Ile Thr Val  
 50 55 60

Ser Asn His Met Ser Thr Leu Asp Asp Pro Val Met Trp Gly Ala Phe  
 65 70 75 80

Lys Gly Leu Leu Ser Leu Asp Pro Glu Leu Ala Arg Trp Val Leu Ala  
 85 90 95

Ala Glu Asp Ile Cys Phe Arg Asn Pro Ile Phe Ser Tyr Ile Phe Arg  
 100 105 110

Thr Gly Lys Cys Ile Pro Ile Thr Arg Gly Gly Gly Ile Tyr Gln Glu  
 115 120 125

Asn Met Asn Glu Ala Leu Gln Arg Leu Lys Asp Gly Ser Trp Leu His  
 130 135 140

Thr Phe Pro Glu Gly Lys Val Phe Gln Asp Asp Val Pro Ile Arg Arg  
 145 150 155 160  
 Leu Lys Trp Gly Thr Ala Ser Leu Ile Ala Arg Ser Pro Val Thr Pro  
 165 170 175  
 Ile Val Leu Pro Ile Ile His Arg Gly Phe Glu Glu Met Met Pro Glu  
 180 185 190  
 Asn Tyr Asn Asn Gly Arg Arg Pro Leu Val Pro Leu Pro Asn Lys His  
 195 200 205  
 Leu Lys Val Val Val Gly Glu Pro Ile Glu Phe Asp Val Pro Met Met  
 210 215 220  
 Val Glu Thr Ala Val Leu Asp Ser Arg His Val Thr Pro Pro Leu Gln  
 225 230 235 240  
 Glu Val Lys Trp Pro Val Leu Thr Ser Ala Gly Gln Val Leu Asp Glu  
 245 250 255  
 Thr Ala Gln Arg His Leu Tyr Ile Ala Leu Ser Glu Lys Ile Gln Ser  
 260 265 270  
 Ser Leu Glu Thr Leu Arg Leu Leu Ala Lys Arg Leu  
 275 280

&lt;210&gt; 2475

&lt;211&gt; 711

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2475

atggcgggaa gagcgatttt ctctgtatct tgttcatcta ctcccttcct gtgtatccct	60
tattcaactg cttcggtttc atcgatgaat cgactggcgc tccccgccgt ccggattttc	120
ccccgaacca acagatttcc caggattcac tgctctatgt ctgctaacga catcaaagcg	180
ggaaccaata tcgaagtcga tgggtgctcct tggcgtgttc ttgagtttct tcatgttaaa	240
ccaggaaaag gtcgpgcatt tgtgagaact aagatcagga actatgtgaa tggtagcaca	300
gtcgagagaa catttcgtgc tggattttct gttgaggaag ctaatatata taaagaaacc	360
aaacaattca catcaaaaga tgggtctcag tttgttttca tggatttgac cacatacgaa	420

## 047-E2F-PCT.ST25.txt

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 gattgcattt tgctctattg gaaagacaag gttatcgatt tcgatctacc gattacagtt 540  
 aagctaaaag tggttgacgt tgatcctggc cttcgcggtg atactgtgca aggtggatca 600  
 aaaccggcga caatggaaac ggggtgcaata gttgctgtac cactctttat taacgtcggg 660  
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&lt;210&gt; 2476

&lt;211&gt; 236

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2476

Met Ala Gly Arg Ala Ile Phe Ser Val Ser Cys Ser Ser Thr Pro Ser  
 1 5 10 15

Leu Cys Ile Pro Tyr Ser Thr Ala Ser Phe Ser Ser Met Asn Arg Leu  
 20 25 30

Ala Leu Pro Ala Val Arg Ile Ser Pro Arg Thr Asn Arg Phe Pro Arg  
 35 40 45

Ile His Cys Ser Met Ser Ala Asn Asp Ile Lys Ala Gly Thr Asn Ile  
 50 55 60

Glu Val Asp Gly Ala Pro Trp Arg Val Leu Glu Phe Leu His Val Lys  
 65 70 75 80

Pro Gly Lys Gly Ala Ala Phe Val Arg Thr Lys Ile Arg Asn Tyr Val  
 85 90 95

Asn Gly Ser Thr Val Glu Arg Thr Phe Arg Ala Gly Ile Ser Val Glu  
 100 105 110

Glu Ala Asn Ile Tyr Lys Glu Thr Lys Gln Phe Thr Tyr Lys Asp Gly  
 115 120 125

Ser Gln Phe Val Phe Met Asp Leu Thr Thr Tyr Glu Glu Thr Arg Leu  
 130 135 140

Asn Glu Ser Asp Met Gly Glu Lys Thr Lys Trp Leu Lys Glu Gly Met  
 145 150 155 160



Asp Cys Ile Leu Leu Tyr Trp Lys Asp Lys Val Ile Asp Phe Asp Leu  
 165 170 175

Pro Ile Thr Val Lys Leu Lys Val Val Asp Val Asp Pro Gly Leu Arg  
 180 185 190

Gly Asp Thr Val Gln Gly Gly Ser Lys Pro Ala Thr Met Glu Thr Gly  
 195 200 205

Ala Ile Val Ala Val Pro Leu Phe Ile Asn Val Gly Glu Glu Ile Phe  
 210 215 220

Val Asp Thr Arg Thr Gly Ala Tyr Met Asn Arg Ala  
 225 230 235

<210> 2477

<211> 735

<212> DNA

<213> Arabidopsis thaliana

<400> 2477  
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 gatgtcttca caccatgggt cgttacgaca attttggatt tctacattaa tcttgtacct 180  
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 ctatgggttg ctctattgat aggtcttggc agcgttggca cgagcgcagt cattgtcgtg 660  
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 cggaagcaaa gttaa 735

<210> 2478

<211> 244

<212> PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2478

Met Ala Thr Thr Ser Leu Val Thr Gly Leu Lys Val Val Leu Pro Val  
1 5 10 15Met Phe Cys Leu Met Leu Ala Thr Leu Val Tyr Thr Ile Ile Thr Asp  
20 25 30Gly Leu Pro Leu Pro Asp Arg Gln Asp Val Phe Thr Pro Trp Phe Val  
35 40 45Thr Thr Ile Leu Asp Phe Tyr Ile Asn Leu Val Pro Ile Ala Val Trp  
50 55 60Ile Val Tyr Lys Glu Ser Thr Trp Ser Gly Ser Ile Leu Trp Thr Ile  
65 70 75 80Leu Leu Ile Ile Phe Gly Ser Leu Thr Thr Cys Val Tyr Leu Phe Leu  
85 90 95Gln Leu Leu Lys Leu Thr Asn Gln Glu Ala Ser Glu Asp Pro Met Tyr  
100 105 110Tyr Leu Leu Leu Arg Asp Ser Ile Lys Asp Gly Val Gly Leu Arg Asp  
115 120 125Lys Asn Ser Leu Val Val Thr Ala Arg Phe Val Phe Gly Ala Leu Gly  
130 135 140Cys Val Met Leu Gly Ala Leu Val Tyr Thr Cys Phe Thr Tyr Gly Ser  
145 150 155 160Pro Phe His Met Glu Leu Leu Tyr Pro Trp Met Val Val Leu Leu Val  
165 170 175Asn Phe Tyr Ile Asp Val Ala Val Leu Ser Val Trp Val Val Tyr Lys  
180 185 190Glu Ser Ser Leu Ile Ile Gly Ile Leu Trp Val Ala Leu Leu Ile Gly  
195 200 205Leu Gly Ser Val Gly Thr Ser Ala Val Ile Val Val Gln Leu Phe Arg  
210 215 220

Leu Ser Pro Leu Asp Pro Leu Tyr Leu Val Leu Val Asn Asn Ser Asn  
 225 230 235 240

Arg Lys Gln Ser

<210> 2479

<211> 210

<212> DNA

<213> Arabidopsis thaliana

<400> 2479

atggtggaga agtcaggagg agaagtcaat ttcccaaat tggagaaacc aacaggcaag 60  
 aaacagacag cgacggttgt tgtgggagtg ttggcggttg gatggctggc gatagagctc 120  
 gtgtttaagc cattgttcaa gaagctgagc tcctccaagg acaaatccga ttccgacgat 180  
 gccaccgtcc ctccccgtc gggcgctga 210

<210> 2480

<211> 69

<212> PRT

<213> Arabidopsis thaliana

<400> 2480

Met Val Glu Lys Ser Gly Gly Glu Val Asn Phe Pro Lys Leu Glu Lys  
 1 5 10 15

Pro Thr Gly Lys Lys Gln Thr Ala Thr Val Val Val Gly Val Leu Ala  
 20 25 30

Val Gly Trp Leu Ala Ile Glu Leu Val Phe Lys Pro Leu Phe Lys Lys  
 35 40 45

Leu Ser Ser Ser Lys Asp Lys Ser Asp Ser Asp Asp Ala Thr Val Pro  
 50 55 60

Pro Pro Ser Gly Ala  
 65

<210> 2481

<211> 657

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2481

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atggcggcaa aatcctacct cgttatcccg acggtaaaact ccgttacaac ggtggtcaca    60
ctcgcgtcct cgccgttcct cgctccgtct cttttccgg ttagtttcac gctctcgatc    120
tcattgtcaa ttttgaattt cacaaaaaaa aaaacgaaat cggttttgtg gaaagagaaa    180
ttaaggccac acgtgtggtg cgttttaaca gagttagcgt cgaagatggc ggagatgtgc    240
ggcggcgtcg gcggatctat aaccgtaacg atccgatgtc agctccgac ggaagatctc    300
gacgcgctcg ttcaattac ttccgatgaa gatctagtga atctaatacga agagtacgat    360
ctcgtttcct cttcatctcc gatgaaaatc agagtcttct taaatccacc aaaatccgcc    420
gccggatcta aaaaatctcc tcctccgta gcgttaccgt catcaaccac cagctcatca    480
tcttcacaa cttcctctac ttcatcaagt cctagatctc cgtctctatc aaaaccaccg    540
ctacctcgt ctccaccgag aataacgacg gttacgaaga atccgtgtta tggttgttat    600
gttcaccgta attccagaaa tatctacctt gttcacaacg gcaatcactg gcaataa    657

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&lt;210&gt; 2482

&lt;211&gt; 218

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2482

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Met Ala Ala Lys Ser Tyr Leu Val Ile Pro Thr Val Asn Ser Val Thr
1      5      10      15

Thr Val Val Thr Leu Ala Ser Ser Pro Phe Leu Ala Pro Ser His Phe
20     25     30

Pro Val Ser Phe Thr Leu Ser Ile Ser Leu Ser Ile Leu Asn Phe Thr
35     40     45

Lys Lys Lys Thr Lys Ser Val Leu Trp Lys Glu Lys Leu Arg Pro His
50     55     60

Val Trp Cys Val Leu Thr Glu Leu Ala Ser Lys Met Ala Glu Met Cys
65     70     75     80

```

Gly Gly Val Gly Gly Ser Ile Thr Val Thr Ile Arg Cys Gln Leu Pro  
 85 90 95

Thr Glu Asp Leu Asp Ala Leu Val Ser Ile Thr Ser Asp Glu Asp Leu  
 100 105 110

Val Asn Leu Ile Glu Glu Tyr Asp Leu Val Ser Ser Ser Pro Met  
 115 120 125

Lys Ile Arg Val Phe Leu Asn Pro Pro Lys Ser Ala Ala Gly Ser Lys  
 130 135 140

Lys Ser Pro Pro Pro Leu Ala Leu Pro Ser Ser Thr Thr Thr Ser Ser  
 145 150 155 160

Ser Ser Thr Thr Ser Ser Thr Ser Ser Ser Pro Arg Ser Pro Ser Leu  
 165 170 175

Ser Lys Pro Pro Leu Pro Pro Ser Pro Pro Arg Ile Thr Thr Val Thr  
 180 185 190

Lys Asn Pro Cys Tyr Gly Cys Tyr Val His Arg Asn Ser Arg Asn Ile  
 195 200 205

Tyr Leu Val His Asn Gly Asn His Trp Gln  
 210 215

<210> 2483

<211> 1098

<212> DNA

<213> Arabidopsis thaliana

<400> 2483

atggcttttaa cattgtcaac cacaaagacc ttactaaca taaactgctc aaacaatact	60
tccaacataa ccacctttaa gctctcaag cttcctcttt tctggccatg gcaaaaaggctc	120
aaaatgggtc ctttaagtgt ttctcctatg ggttttggga catgggcttg gggtaatcag	180
cttctttggg gttatcagac ttccatggat gatcagcttc aacaagcttt tgaattggct	240
ttggaaaatg gaatcaattt gtttgatact gctgattctt atggcactgg taggcttaac	300
ggccaaagtg agagactttt ggggaaattc attaaagaat ctcaaggact taaagggaaa	360
caaaatgaag tagtggtagc tacaaagttt gcagcttacc catggagggt aacttcagga	420
cagtttgtag atgcctgcag agcttcttta gaccggcttc agatagacca gctcgggatt	480

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ggacagcttc actggtcaac tgcaagctac gcgcctctac aagagcttgt tctttgggat 540
ggctcagtgc aaatgtacga aaaggggttta gttagagccg ttggagttag taactatgga 600
cctcaacagc ttgtgaagat tcatgattac cttaaaactc gaggggttcc tttatgttct 660
gcccgaagtgc aattctcatt gctaagcatg ggaaaagagc aactagagat caagagtata 720
tgcgacgagc tcgggattcg tttaatctct tatagtccct ttgggctagg aatgctaact 780
gggaaatact cctcttcaaa acttcccact ggtccacgat cattgctgtt ccgacaaatt 840
cttcctggat tagaacctct tcttttagca ctgagcgaga ttgcaagaa acgaggaaag 900
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gatgaacagc ttcagttaga atatgcagct aaagaatcac caaagtcaat gattcagaat 1080
atttttcaga caagatga 1098

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&lt;210&gt; 2484

&lt;211&gt; 365

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2484

```

Met Ala Leu Thr Leu Ser Thr Thr Lys Thr Phe Thr Asn Ile Asn Cys
1      5      10

```

```

Ser Asn Asn Thr Ser Asn Ile Thr Thr Phe Lys Pro Leu Lys Leu Pro
20      25      30

```

```

Leu Phe Trp Pro Trp Gln Lys Val Lys Met Gly Pro Leu Ser Val Ser
35      40      45

```

```

Pro Met Gly Phe Gly Thr Trp Ala Trp Gly Asn Gln Leu Leu Trp Gly
50      55      60

```

```

Tyr Gln Thr Ser Met Asp Asp Gln Leu Gln Gln Ala Phe Glu Leu Ala
65      70      75      80

```

```

Leu Glu Asn Gly Ile Asn Leu Phe Asp Thr Ala Asp Ser Tyr Gly Thr
85      90      95

```

```

Gly Arg Leu Asn Gly Gln Ser Glu Arg Leu Leu Gly Lys Phe Ile Lys
100     105     110

```

Glu Ser Gln Gly Leu Lys Gly Lys Gln Asn Glu Val Val Val Ala Thr  
 115 120 125  
 Lys Phe Ala Ala Tyr Pro Trp Arg Leu Thr Ser Gly Gln Phe Val Asn  
 130 135 140  
 Ala Cys Arg Ala Ser Leu Asp Arg Leu Gln Ile Asp Gln Leu Gly Ile  
 145 150 155 160  
 Gly Gln Leu His Trp Ser Thr Ala Ser Tyr Ala Pro Leu Gln Glu Leu  
 165 170 175  
 Val Leu Trp Asp Gly Leu Val Gln Met Tyr Glu Lys Gly Leu Val Arg  
 180 185 190  
 Ala Val Gly Val Ser Asn Tyr Gly Pro Gln Gln Leu Val Lys Ile His  
 195 200 205  
 Asp Tyr Leu Lys Thr Arg Gly Val Pro Leu Cys Ser Ala Gln Val Gln  
 210 215 220  
 Phe Ser Leu Leu Ser Met Gly Lys Glu Gln Leu Glu Ile Lys Ser Ile  
 225 230 235 240  
 Cys Asp Glu Leu Gly Ile Arg Leu Ile Ser Tyr Ser Pro Leu Gly Leu  
 245 250 255  
 Gly Met Leu Thr Gly Lys Tyr Ser Ser Ser Lys Leu Pro Thr Gly Pro  
 260 265 270  
 Arg Ser Leu Leu Phe Arg Gln Ile Leu Pro Gly Leu Glu Pro Leu Leu  
 275 280 285  
 Leu Ala Leu Ser Glu Ile Ala Lys Lys Arg Gly Lys Thr Met Pro Gln  
 290 295 300  
 Val Ala Ile Asn Trp Cys Ile Cys Lys Gly Thr Val Pro Ile Pro Gly  
 305 310 315 320  
 Ile Lys Ser Val Arg His Val Glu Asp Asn Leu Gly Ala Leu Gly Trp  
 325 330 335  
 Lys Leu Thr Asn Asp Glu Gln Leu Gln Leu Glu Tyr Ala Ala Lys Glu  
 340 345 350  
 Ser Pro Lys Ser Met Ile Gln Asn Ile Phe Gln Thr Arg  
 355 360 365

&lt;210&gt; 2485

&lt;211&gt; 498

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2485

```

atggcactaa gaatgtgggc ttcttctaca gaaaacgctc tcaagcttctc ttcttctggt      60
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ttgaagtatg caaatccaca tgagtggggt aaacatgaag gctctgttgc caccattggc    180
atcactgccc atgctcagga ccatttaggt gaagtgggtt ttgttgaact gccagaggac    240
aatacttcag tgagcaaaga gaaaagcttt ggagcagtgagg agagtgtgaa ggcaacaagt    300
gagatcttat caccaatctc aggtgaaatc attgagggtta acaagaagct cacagaatca    360
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gaagatgctg ctactactg

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&lt;210&gt; 2486

&lt;211&gt; 165

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2486

```

Met Ala Leu Arg Met Trp Ala Ser Ser Thr Ala Asn Ala Leu Lys Leu
 1          5          10          15

Ser Ser Ser Val Ser Lys Ser His Leu Ser Pro Phe Ser Phe Ser Arg
 20          25          30

Cys Phe Ser Thr Val Leu Glu Gly Leu Lys Tyr Ala Asn Ser His Glu
 35          40          45

Trp Val Lys His Glu Gly Ser Val Ala Thr Ile Gly Ile Thr Ala His
 50          55          60

Ala Gln Asp His Leu Gly Glu Val Val Phe Val Glu Leu Pro Glu Asp
 65          70          75          80

```



Asn Thr Ser Val Ser Lys Glu Lys Ser Phe Gly Ala Val Glu Ser Val  
85 90 95

Lys Ala Thr Ser Glu Ile Leu Ser Pro Ile Ser Gly Glu Ile Ile Glu  
100 105 110

Val Asn Lys Lys Leu Thr Glu Ser Pro Gly Leu Ile Asn Ser Ser Pro  
115 120 125

Tyr Glu Asp Gly Trp Met Ile Lys Val Lys Pro Ser Ser Pro Ala Glu  
130 135 140

Leu Glu Ser Leu Met Gly Pro Lys Glu Tyr Thr Lys Phe Cys Glu Glu  
145 150 155 160

Glu Asp Ala Ala His  
165

<210> 2487

<211> 357

<212> DNA

<213> Arabidopsis thaliana

<400> 2487  
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ccttgccgtt tcattgcacc cgtctttgct gacttagcca agaagcacct cgacgtagtc 180  
ttcttaagg tcgatgttga cgaattgaac actggtgctg aggagttaa agttcaggca 240  
atgccaacgt ttattcttcat gaaagaagga gagatcaagg agactgtggt tgggtgctgct 300  
aaagaagaaa tcattgccaa tctcgagaag cacaagacag ttgttgctgc tgcttga 357

<210> 2488

<211> 118

<212> PRT

<213> Arabidopsis thaliana

<400> 2488

Met Ala Ala Glu Gly Glu Val Ile Ala Cys His Thr Val Glu Asp Trp  
1 5 10 15

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Thr Glu Lys Leu Lys Ala Ala Asn Glu Ser Lys Lys Leu Ile Val Ile  
20 25 30

Asp Phe Thr Ala Thr Trp Cys Pro Pro Cys Arg Phe Ile Ala Pro Val  
35 40 45

Phe Ala Asp Leu Ala Lys Lys His Leu Asp Val Val Phe Phe Lys Val  
50 55 60

Asp Val Asp Glu Leu Asn Thr Val Ala Glu Glu Phe Lys Val Gln Ala  
65 70 75 80

Met Pro Thr Phe Ile Phe Met Lys Glu Gly Glu Ile Lys Glu Thr Val  
85 90 95

Val Gly Ala Ala Lys Glu Glu Ile Ile Ala Asn Leu Glu Lys His Lys  
100 105 110

Thr Val Val Ala Ala Ala  
115

<210> 2489

<211> 1056

<212> DNA

<213> Arabidopsis thaliana

<400> 2489  
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gagaatagga tcaaggaatt tgagaagtct ttgggatcta ccttggaaaa aagtgtctct 180  
gagagaaaaa gtcgagtcaa agctcagcag gctttacggg aggcgttagc acagactgag 240  
tcacatgatt tacacagcac aatatacccg atgcgacctt ttggcactat ccagtcttgc 300  
ttctctacta ggaacgggac accgaggcag ccattgcttg ttctcttgc gagggcatgt 360  
ttgatctttg atccggcttt ggttcctcct gcgtctcttg agggctctga agagtattct 420  
cattgctgga tactctatgt gtttcattct aatactgata tcgagaagct atggagaaaa 480  
ccatctcagt cgaagctcaa ggcaaagggt agagtgccac ggctaaatgg ggaacggaag 540  
ggagtctttg ctacgcggtc cctcatcga ccttgctcca ttggcctcac cgttgctaag 600  
gtggaggaaa tccaaaagga taaggttctc ctctctggtg tcgatctggt ggaatgggact 660  
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&lt;210&gt; 2490

&lt;211&gt; 351

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2490

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Met Ala Thr Ser Gly Arg Ser His Gly Ser Thr Thr Ala Ala Leu Ala
1      5      10      15

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Phe Thr Leu Ala Val Val Ser Val Ser Ala Ala Phe Ser Leu Tyr Arg
20     25     30

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Trp Arg Arg Arg Glu Glu Asp Leu Glu Asn Arg Ile Lys Glu Phe Glu
35     40     45

```

```

Lys Ser Leu Gly Ser Thr Leu Glu Lys Ser Ala Ser Glu Arg Lys Gly
50     55     60

```

```

Arg Val Lys Ala Gln Gln Ala Leu Arg Glu Ala Leu Ala Gln Thr Glu
65     70     75     80

```

```

Ser His Asp Leu His Ser Thr Ile Tyr Pro Met Arg Pro Ile Gly Thr
85     90     95

```

```

Ile Gln Ser Cys Phe Ser Thr Arg Asn Gly Thr Pro Arg Gln Pro Leu
100    105    110

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```

Leu Val Ser Leu Ala Arg Ala Cys Leu Ile Phe Asp Pro Ala Leu Val
115    120    125

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```

Pro Pro Ala Ser Leu Glu Gly Leu Glu Glu Tyr Ser His Cys Trp Ile
130    135    140

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```

Leu Tyr Val Phe His Leu Asn Thr Asp Ile Glu Lys Leu Trp Arg Lys
Page 3517

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145                      150                      155                      160

Pro Ser Gln Ser Lys<sub>165</sub> Leu Lys Ala Lys Val<sub>170</sub> Arg Val Pro Arg Leu<sub>175</sub> Asn

Gly Glu Arg Lys<sub>180</sub> Gly Val Phe Ala Thr<sub>185</sub> Arg Ser Pro His Arg<sub>190</sub> Pro Cys

Pro Ile Gly<sub>195</sub> Leu Thr Val Ala Lys<sub>200</sub> Val Glu Glu Ile<sub>205</sub> Gln Lys Asp Lys

Val Leu<sub>210</sub> Leu Ser Gly Val Asp<sub>215</sub> Leu Val Asp Gly Thr<sub>220</sub> Pro Val Leu Asp

Ile Lys Pro Tyr Leu Pro<sub>230</sub> Tyr Ser Asp Ser Ile<sub>235</sub> Gln Gly Ala Ser Val<sub>240</sub>

Pro Asn Trp Val Lys<sub>245</sub> Glu Asp Cys Ser Leu<sub>250</sub> Ala Val Ala Ser Val<sub>255</sub> Thr

Phe Ser Asp Thr<sub>260</sub> Phe Ser Ser Ser Ile<sub>265</sub> Thr Ser Cys Trp Lys<sub>270</sub> Leu Ile

Glu Lys Lys<sub>275</sub> Ser Leu Tyr Ser Ser<sub>280</sub> Ala Asp Glu Phe Arg<sub>285</sub> Ser Leu Ile

Thr Gln<sub>290</sub> Val Leu Ser Trp Asp<sub>295</sub> Ile Arg Ser Met Ser<sub>300</sub> Gln Arg Asn Lys

Pro Gln Asp Thr Leu Asp<sub>310</sub> Glu Glu Ile Val Tyr<sub>315</sub> His Leu Val Leu<sub>320</sub> Glu

Gly Leu Asp Val Ser<sub>325</sub> Tyr Met Ile Asp Asn<sub>330</sub> Glu Ser Asn Ile Leu<sub>335</sub> Val

Gln Asp Val Ser<sub>340</sub> Leu Pro Lys Asn Leu<sub>345</sub> Gln Asp Val Ala Gly<sub>350</sub> Ser

<210> 2491

<211> 1539

<212> DNA

<213> Arabidopsis thaliana

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047-E2F-PCT.ST25.txt

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<210> 2492

<211> 512

<212> PRT

<213> *Arabidopsis thaliana*

<400> 2492

047-E2F-PCT.ST25.txt

Met Asn Gly Cys Glu Ala Asp His Lys Ala Pro Leu Gly Thr Val Glu  
1 5 10 15

Thr Arg Thr Leu Ser Thr Val Pro Ser Pro Ala Ala Ala Thr Glu Arg  
20 25 30

Leu Ile Thr Ala Val Ser Asp Leu Lys Ser Gln Pro Pro Phe Ser  
35 40 45

Ser Gly Ile Val Arg Leu Gln Val Pro Ile Glu Gln Lys Ile Gly Ala  
50 55 60

Ile Asp Trp Leu His Ala Gln Asn Glu Ile Leu Pro Arg Ser Phe Phe  
65 70 75 80

Ser Arg Arg Ser Asp Ser Gly Arg Pro Asp Leu Leu Gln Asp Phe Ser  
85 90 95

Ser Asp Asn Gly Ser Ser Asp His Asn Pro Val Ser Val Ala Gly Ile  
100 105 110

Gly Ser Ala Val Phe Phe Arg Asp Leu Asp Pro Phe Ser His Asp Asp  
115 120 125

Trp Arg Ser Ile Arg Arg Phe Leu Ser Ser Lys Ser Pro Leu Ile Arg  
130 135 140

Ala Tyr Gly Gly Leu Arg Phe Asp Pro Thr Gly Lys Ile Ala Val Glu  
145 150 155 160

Trp Glu His Phe Gly Ser Phe Tyr Phe Thr Val Pro Gln Val Glu Phe  
165 170 175

Asp Glu Phe Gly Gly Ser Ser Met Leu Ala Ala Thr Val Ala Trp Asp  
180 185 190

Asn Glu Leu Ser Trp Thr Leu Glu Asn Ala Ile Glu Ala Leu Gln Glu  
195 200 205

Thr Met Leu Gln Val Ser Ser Val Ile Met Arg Leu Arg Arg Glu Ser  
210 215 220

Leu Gly Val Ile Val Val Ser Lys Asn His Val Pro Ser Glu Gly Ala  
225 230 235 240

Tyr Tyr Pro Ala Val Asn Asn Ala Leu Glu Ile Ile Lys Asp Lys His  
245 250 255

047-E2F-PCT.ST25.txt

Ser Pro Leu Ser Lys Val Val Leu Ala Arg Ser Ser Arg Ile Ile Thr  
260 265 270

Asp Thr Asp Ile Asp Pro Ile Ala Trp Leu Ala Arg Leu Gln Cys Glu  
275 280 285

Gly Gln Asp Ala Tyr Gln Phe Cys Leu Gln Pro Pro Gly Ala Pro Ala  
290 295 300

Phe Ile Gly Asn Thr Pro Glu Arg Leu Phe His Arg Lys His Leu Gly  
305 310 315 320

Val Cys Ser Glu Ala Leu Ala Ala Thr Arg Pro Arg Gly Asp Ser Lys  
325 330 335

Val Arg Glu Met Glu Ile Glu Arg Asp Leu Leu Thr Ser Pro Lys Asp  
340 345 350

Asp Leu Glu Phe Ser Ile Val Arg Glu Asn Ile Arg Glu Lys Leu Lys  
355 360 365

Thr Ile Cys Asp Arg Val Val Val Lys Pro His Lys Ser Val Arg Lys  
370 375 380

Leu Ala Arg Val Gln His Leu Tyr Ser Gln Leu Ala Gly Gln Leu Lys  
385 390 395 400

Arg Glu Asp Asp Glu Phe Asn Ile Leu Thr Ala Leu His Pro Thr Pro  
405 410 415

Ala Val Cys Gly Cys Pro Val Glu Glu Ala Arg Leu Leu Ile Lys Gln  
420 425 430

Ile Glu Ser Phe Asp Arg Gly Met Tyr Ala Gly Pro Ile Gly Phe Phe  
435 440 445

Gly Gly Gly Glu Ser Glu Phe Ser Val Gly Ile Arg Ser Ala Leu Val  
450 455 460

Glu Lys Gly Leu Gly Ala Leu Ile Tyr Ala Gly Thr Gly Ile Val Ser  
465 470 475 480

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485 490 495

Gln Phe Thr Lys Ser Leu Glu His Glu Ser Ala Leu Gln Pro Ile Asn

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<210> 2493  
<211> 798  
<212> DNA  
<213> *Arabidopsis thaliana*

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acctctaaca tcatagactt cgacacgggt cccgcaaatt gcaaagacta tgttgaagac    240
tacttgatca cttccaaaca gtaccaatac gactccaaaa ccgtgtgcaa agaggcttat    300
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gaccgttgga agttgtggaa gaatgtcact ctgcacaatc tcgaagctgc tggcgtgacc    600
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tcaaaaggta ggaagagtct cgtgaagaaa ggatacaaca tcgttggtgcaa tatcgagat    720
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<210> 2494  
<211> 265  
<212> PRT  
<213> *Arabidopsis thaliana*

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<400> 2494
Met Lys Ile Leu Ser Leu Ser Leu Leu Leu Leu Ala Ala Thr Val
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Ser Ala Ser Val Pro Gly Leu Ile Glu Leu Val Asp Ser Lys Thr Ile
          20          25          30

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Phe Gly Asn Val Ala Glu Leu Leu Glu Lys Glu Lys Leu Ser Ile Asn  
 35 40 45

Tyr Ala Asn Cys Arg Ser Trp His Leu Gly Val Glu Thr Ser Asn Ile  
 50 55 60

Ile Asp Phe Asp Thr Val Pro Ala Asn Cys Lys Asp Tyr Val Glu Asp  
 65 70 75 80

Tyr Leu Ile Thr Ser Lys Gln Tyr Gln Tyr Asp Ser Lys Thr Val Cys  
 85 90 95

Lys Glu Ala Tyr Phe Tyr Ala Lys Gly Leu Ala Leu Lys Asn Asp Thr  
 100 105 110

Val Asn Val Trp Ile Phe Asp Leu Asp Asp Thr Leu Leu Ser Ser Ile  
 115 120 125

Pro Tyr Tyr Ala Lys Tyr Gly Tyr Gly Thr Glu Lys Thr Asp Pro Gly  
 130 135 140

Ala Tyr Trp Leu Trp Leu Gly Thr Gly Ala Ser Thr Pro Gly Leu Pro  
 145 150 155 160

Glu Ala Leu His Leu Tyr Gln Asn Ile Ile Glu Leu Gly Ile Glu Pro  
 165 170 175

Ile Ile Leu Ser Asp Arg Trp Lys Leu Trp Lys Asn Val Thr Leu Asp  
 180 185 190

Asn Leu Glu Ala Ala Gly Val Thr Tyr Trp Lys His Leu Ile Leu Lys  
 195 200 205

Pro Asn Gly Ser Asn Leu Arg Gln Val Val Tyr Lys Ser Lys Val Arg  
 210 215 220

Lys Ser Leu Val Lys Lys Gly Tyr Asn Ile Val Gly Asn Ile Gly Asp  
 225 230 235 240

Gln Trp Ala Asp Leu Val Glu Asp Thr Pro Gly Arg Val Phe Lys Leu  
 245 250 255

Pro Asn Pro Leu Tyr Tyr Val Pro Ser  
 260 265

<210> 2495

<211> 678

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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<400> 2495
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cgtatatcag tttctagggt ttctctgaat catcccggct cgaaatttgg gttctcactc      180
gatactaggg tgagaaatga gttttatcgt agagcagaag aaggtaaac agaagctgaa      240
tctgaagaat ttgttgctga aatcgctgat acggaaggaa atgtagagga agtggtcgaa      300
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ggtatcggtg ttgaaattgt gtttccata tactctccca acatcaaaga gataaaagtg      600
gtgagtcaca ggaagtaag aagagcaagg ctttactatc tgagggacaa gcttcctcgt      660
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&lt;210&gt; 2496

&lt;211&gt; 225

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

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<400> 2496
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Arg Asn Pro Thr Gln Ser Ser Lys Asn Leu Gly Phe Ser Ser Phe Leu
20      25      30
Ser Cys Ala Pro Ser Met Asp Ser Arg Ile Ser Val Ser Arg Leu Ser
35      40      45
Leu Asn His Pro Gly Ser Lys Phe Gly Phe Ser Leu Asp Thr Arg Val
50      55      60
Arg Asn Glu Phe Ile Val Arg Ala Glu Glu Gly Asn Thr Glu Ala Glu
65      70      75      80

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Ser Glu Glu Phe Val Ala Glu Ile Ala Asp Thr Glu Gly Asn Val Glu  
85 90 95

Glu Val Val Glu Ala Lys Pro Thr Arg Lys Pro Arg Ile Lys Leu Gly  
100 105 110

Asp Val Met Gly Ile Leu Asn Gln Lys Ala Ile Glu Val Ala Glu Lys  
115 120 125

Val Arg Pro Val Pro Glu Ile Arg Thr Gly Asp Ile Val Glu Ile Lys  
130 135 140

Leu Glu Val Pro Glu Asn Lys Arg Arg Leu Ser Ile Tyr Lys Gly Ile  
145 150 155 160

Val Met Ser Arg Gln Asn Ala Gly Ile His Thr Thr Ile Arg Ile Arg  
165 170 175

Arg Ile Ile Ala Gly Ile Gly Val Glu Ile Val Phe Pro Ile Tyr Ser  
180 185 190

Pro Asn Ile Lys Glu Ile Lys Val Val Ser His Arg Lys Val Arg Arg  
195 200 205

Ala Arg Leu Tyr Tyr Leu Arg Asp Lys Leu Pro Arg Leu Ser Thr Phe  
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Lys  
225

<210> 2497

<211> 849

<212> DNA

<213> Arabidopsis thaliana

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<210> 2498

<211> 282

<212> PRT

<213> Arabidopsis thaliana

<400> 2498

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20 25 30

Asn Leu Asp Leu Pro Ala Gly Ser Arg Cys Leu Leu Val Gly Ala Asn  
35 40 45

Gly Ser Gly Lys Thr Thr Leu Leu Lys Ile Leu Ala Gly Lys His Met  
50 55 60

Val Gly Gly Lys Asn Val Val Gln Val Leu Asp Arg Ser Ala Phe His  
65 70 75 80

Asp Thr Glu Leu Val Cys Ser Gly Asp Leu Ser Tyr Leu Gly Gly Ser  
85 90 95

Trp Ser Lys Thr Ala Gly Ser Ala Gly Asp Ile Pro Leu Gln Gly Asp  
100 105 110

Phe Ser Ala Glu His Met Ile Phe Gly Val Glu Gly Ile Asp Pro Phe  
115 120 125

Arg Arg Glu Lys Leu Ile Asp Leu Leu Asp Ile Asn Leu Gln Trp Arg  
 130 135 140

Met His Lys Val Ser Asp Gly Gln Arg Arg Arg Val Gln Ile Cys Met  
 145 150 155 160

Gly Leu Leu His Pro Phe Lys Val Leu Leu Leu Asp Glu Val Thr Val  
 165 170 175

Asp Leu Asp Val Val Ala Arg Met Asp Leu Leu Glu Phe Phe Lys Glu  
 180 185 190

Glu Cys Glu Gln Arg Gly Ala Thr Ile Val Tyr Ala Thr His Ile Phe  
 195 200 205

Asp Gly Leu Glu Thr Trp Ala Ser His Leu Ala Tyr Ile Asn Gly Gly  
 210 215 220

Glu Leu Lys Leu Ser Ala Lys Leu Asp Glu Ile Lys Asp Leu Lys Thr  
 225 230 235 240

Ser Pro Asn Leu Leu Ser Val Val Glu Ala Trp Leu Arg Ser Glu Thr  
 245 250 255

Lys Val Glu Lys Lys Thr Lys Lys Lys Pro Val Val Thr Ser Pro Phe  
 260 265 270

Met Ser Ser Arg Gln Met Ala Tyr Tyr Arg  
 275 280

<210> 2499

<211> 483

<212> DNA

<213> Arabidopsis thaliana

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<210> 2500

<211> 160

<212> PRT

<213> Arabidopsis thaliana

<400> 2500

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Ala Ile Ser His Lys Asn Pro Asn Ser Ile Ser Phe His Gly Leu Arg  
20 25 30

Pro Leu Arg Leu Gly Gly Ser Ser Ala Leu Pro Lys Leu Ser Thr  
35 40 45

Thr Gly Arg Lys Ser Ser Ser Ala Val Val Arg Ala Glu Leu Ser Pro  
50 55 60

Ser Ile Val Ile Ser Leu Ser Thr Gly Leu Ser Leu Phe Leu Gly Arg  
65 70 75 80

Phe Val Phe Phe Asn Phe Gln Arg Glu Asn Val Ala Lys Gln Gly Leu  
85 90 95

Pro Glu Gln Asn Gly Lys Thr His Phe Glu Ala Gly Asp Asp Arg Ala  
100 105 110

Lys Glu Tyr Val Ser Leu Leu Lys Ser Asn Asp Pro Ile Gly Phe Asn  
115 120 125

Ile Val Asp Val Leu Ala Trp Gly Ser Ile Gly His Ile Val Ala Tyr  
130 135 140

Tyr Ile Leu Ala Thr Ser Ser Asn Gly Tyr Asp Pro Ser Phe Phe Gly  
145 150 155 160

<210> 2501

&lt;211&gt; 750

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2501

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ccagccattc aacccaacgc cggccacccc gtcctagaga aagggtggctt cgctctccca   180
actttcactc accgctcctt caacgttcca accacacact ggctccggtcg catctggggc   240
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tacaatagcc ctaacacgtg taaagcttcg agccattcgc tgttctttaa gcatgcgtgt   660
ccttcgagtt tcacttttgc tcatgatagt ccttcgctta tgcattgactg tgcttctcct   720
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&lt;210&gt; 2502

&lt;211&gt; 249

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2502

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Met Ala Lys Thr Ser Leu Pro Leu Ala Ala Ser Phe Leu Leu Leu Ile
 1           5           10           15

Ser Phe Ser Ser Ala Val Asp Thr Ser Arg Leu Phe Leu Thr Val Val
 20           25           30

Asn Asn Cys Pro Phe Thr Val Trp Pro Ala Ile Gln Pro Asn Ala Gly
 35           40           45

His Pro Val Leu Glu Lys Gly Gly Phe Ala Leu Pro Thr Phe Thr His
 50           55           60

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Arg Ser Phe Asn Val Pro Thr Thr His Trp Ser Gly Arg Ile Trp Ala  
65 70 75 80

Arg Thr Trp Cys Ala His Tyr Asn Gly Lys Phe Ser Cys Leu Thr Gly  
85 90 95

Asp Cys Gly Asn Arg Leu Glu Cys Asn Gly Leu Gly Gly Ala Pro Pro  
100 105 110

Ala Ser Leu Ala Gln Phe Asp Leu His His Gly Gly His His Asp Phe  
115 120 125

Ser Ser Tyr Gly Val Ser Leu Val Asp Gly Tyr Asn Val Pro Met Thr  
130 135 140

Val Thr Pro His Glu Gly His Gly Val Cys Pro Val Val Gly Cys Arg  
145 150 155 160

Glu Asp Leu Ile Lys Thr Cys Pro Ala His Leu Gln Val Arg Ser His  
165 170 175

Ser Gly His Val Val Ala Cys Lys Ser Gly Cys Glu Ala Phe His Thr  
180 185 190

Asp Glu Leu Cys Cys Arg Gly His Tyr Asn Ser Pro Asn Thr Cys Lys  
195 200 205

Ala Ser Ser His Ser Leu Phe Phe Lys His Ala Cys Pro Ser Ser Phe  
210 215 220

Thr Phe Ala His Asp Ser Pro Ser Leu Met His Asp Cys Ala Ser Pro  
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Arg Glu Leu Lys Val Ile Phe Cys His  
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<210> 2503

<211> 990

<212> DNA

<213> Arabidopsis thaliana

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047-E2F-PCT.ST25.txt

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 tatacacctg ttcttgatga acttttagat cccaagaatc aaatcaatgg ggatcacaaa 300  
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<210> 2504

<211> 329

<212> PRT

<213> Arabidopsis thaliana

<400> 2504

Met Glu Asn His Thr Thr Met Lys Val Ser Ser Leu Asn Cys Ile Asp  
 1 5 10 15

Leu Ala Asn Asp Asp Leu Asn His Ser Val Val Ser Leu Lys Gln Ala  
 20 25 30

Cys Leu Asp Cys Gly Phe Phe Tyr Val Ile Asn His Gly Ile Ser Glu  
 35 40 45

Glu Phe Met Asp Asp Val Phe Glu Gln Ser Lys Lys Leu Phe Ala Leu  
 50 55 60

Pro Leu Glu Glu Lys Met Lys Val Leu Arg Asn Glu Lys His Arg Gly  
 65 70 75 80

047-E2F-PCT.ST25.txt

Tyr Thr Pro Val Leu Asp Glu Leu Leu Asp Pro Lys Asn Gln Ile Asn  
 85 90 95  
 Gly Asp His Lys Glu Gly Tyr Tyr Ile Gly Ile Glu Val Pro Lys Asp  
 100 105 110  
 Asp Pro His Trp Asp Lys Pro Phe Tyr Gly Pro Asn Pro Trp Pro Asp  
 115 120 125  
 Ala Asp Val Leu Pro Gly Trp Arg Glu Thr Met Glu Lys Tyr His Gln  
 130 135 140  
 Glu Ala Leu Arg Val Ser Met Ala Ile Ala Arg Leu Leu Ala Leu Ala  
 145 150 155 160  
 Leu Asp Leu Asp Val Gly Tyr Phe Asp Arg Thr Glu Met Leu Gly Lys  
 165 170 175  
 Pro Ile Ala Thr Met Arg Leu Leu Arg Tyr Gln Gly Ile Ser Asp Pro  
 180 185 190  
 Ser Lys Gly Ile Tyr Ala Cys Gly Ala His Ser Asp Phe Gly Met Met  
 195 200 205  
 Thr Leu Leu Ala Thr Asp Gly Val Met Gly Leu Gln Ile Cys Lys Asp  
 210 215 220  
 Lys Asn Ala Met Pro Gln Lys Trp Glu Tyr Val Pro Pro Ile Lys Gly  
 225 230 235 240  
 Ala Phe Ile Val Asn Leu Gly Asp Met Leu Glu Arg Trp Ser Asn Gly  
 245 250 255  
 Phe Phe Lys Ser Thr Leu His Arg Val Leu Gly Asn Gly Gln Glu Arg  
 260 265 270  
 Tyr Ser Ile Pro Phe Phe Val Glu Pro Asn His Asp Cys Leu Val Glu  
 275 280 285  
 Cys Leu Pro Thr Cys Lys Ser Glu Ser Glu Leu Pro Lys Tyr Pro Pro  
 290 295 300  
 Ile Lys Cys Ser Thr Tyr Leu Thr Gln Arg Tyr Glu Glu Thr His Ala  
 305 310 315 320  
 Asn Leu Ser Ile Tyr His Gln Gln Thr  
 325

&lt;210&gt; 2505

&lt;211&gt; 714

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2505

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aaagcttgtc agagatatgt gacctcaggt gggaccatga gaagtgttcc aatcggagca    120
ggacggcgca agaacaagaa caactcacca acttcacatt accaccatgt gactatctcc    180
gaaacaaatg gtcggttcct tagtttcagc ctcgagatg atcaaaagggt ctcgagtaat    240
aggtttggtta atcaaaagct agttgctagg atagagaaca atgacgagcg ctctaataac    300
aacacttcga acggtttgaa ttgttttccg ggagtttcgt ggcgtacac gtggaatcct    360
gcgttttacc cggttttacc ttattggagc atgccagtgT tgtcttctcc ggtaagtcca    420
agtcctactt ctactcttgg taagcattcg agagacgaag acgagacggt gaagcaaaaa    480
cagaggaatg gatctgtatt ggttccaaag actttgagaa ttgatgatcc taatgaagct    540
gcaaagagtt cgatatggac aacacttggg atcaagaacg aagtatatgt caatggggtt    600
ggttcgaaga aagagggttaa gctcagtaac aaagaagaaa cagagacctc acttgttctt    660
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&lt;210&gt; 2506

&lt;211&gt; 237

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2506

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Met Glu Thr Lys  Phe Cys Tyr Tyr Asn  Asn Tyr Asn Val Asn  Gln Pro
1          5          10          15

```

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Arg His Phe Cys  Lys Ala Cys Gln  Arg Tyr Trp Thr Ser  Gly Gly Thr
20          25          30

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Met Arg Ser Val Pro Ile Gly Ala Gly Arg Arg Lys  Asn Lys Asn Asn
35          40          45

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```

Ser Pro Thr Ser His Tyr His His Val Thr Ile Ser  Glu Thr Asn Gly
Page 3533

```

50

55

60

Pro Val Leu Ser Phe Ser Leu Gly Asp Asp Gln Lys Val Ser Ser Asn  
65 70 75 80

Arg Phe Gly Asn Gln Lys Leu Val Ala Arg Ile Glu Asn Asn Asp Glu  
85 90 95

Arg Ser Asn Asn Asn Thr Ser Asn Gly Leu Asn Cys Phe Pro Gly Val  
100 105 110

Ser Trp Pro Tyr Thr Trp Asn Pro Ala Phe Tyr Pro Val Tyr Pro Tyr  
115 120 125

Trp Ser Met Pro Val Leu Ser Ser Pro Val Ser Ser Pro Thr Ser  
130 135 140

Thr Leu Gly Lys His Ser Arg Asp Glu Asp Glu Thr Val Lys Gln Lys  
145 150 155 160

Gln Arg Asn Gly Ser Val Leu Val Pro Lys Thr Leu Arg Ile Asp Asp  
165 170 175

Pro Asn Glu Ala Ala Lys Ser Ser Ile Trp Thr Thr Leu Gly Ile Lys  
180 185 190

Asn Glu Val Met Phe Asn Gly Phe Gly Ser Lys Lys Glu Val Lys Leu  
195 200 205

Ser Asn Lys Glu Glu Thr Glu Thr Ser Leu Val Leu Cys Ala Asn Pro  
210 215 220

Ala Ala Leu Ser Arg Ser Ile Asn Phe His Glu Gln Met  
225 230 235

&lt;210&gt; 2507

&lt;211&gt; 462

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

<400> 2507  
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gctggtatga tcaaaaagtc caacgaggag tggcgtacgg ttctatctcc tgaacagttt 120  
aagattctta gagagaaatc tattgaaaag agagggtcag gagaatatgt gaagttgttc 180

047-E2F-PCT.ST25.txt

gaggaaggaa tctactgttg tgttggtgtt ggaatccgg ttataaatc aaccactaaa	240
ttcgattccg gttgcggttg gccggctttt ttgatgcta ttcctggcgc cattaaccga	300
accgaggaga gagctggatt aagatatgag ataacttgca caaaatgtga tggacatcta	360
ggtcattgtc taataaatga aggttttcca acaccaactg acgaacgcca ttgcgtcaac	420
agcgttgctc tcaagttctc ttccgctatc acatctcagt ga	462

<210> 2508

<211> 153

<212> PRT

<213> Arabidopsis thaliana

<400> 2508

Met Asn Thr Ser	Pro Lys Met Glu Met	Glu Met Lys Met Glu Thr Lys
1	5	10

Ala Ala Pro Glu Ala Gly Met Ile	Lys Lys Ser Asn Glu Glu Trp Arg
20	25

Thr Val Leu Ser Pro Glu Gln Phe Lys Ile Leu Arg	Glu Lys Ser Ile
35	40

Glu Lys Arg Gly Ser Gly Glu Tyr Val Lys Leu Phe Glu Glu Gly Ile
50

Tyr Cys Cys Val Gly Cys Gly Asn Pro Val Tyr Lys Ser Thr Thr Lys
65

Phe Asp Ser Gly Cys Gly Trp Pro Ala Phe Phe Asp Ala Ile Pro Gly
85

Ala Ile Asn Arg Thr Glu Glu Arg Ala Gly Leu Arg Tyr Glu Ile Thr
100

Cys Thr Lys Cys Asp Gly His Leu Gly His Val Leu Lys Asn Glu Gly
115

Phe Pro Thr Pro Thr Asp Glu Arg His Cys Val Asn Ser Val Ala Leu
130

Lys Phe Ser Ser Ala Ile Thr Ser Gln
145

&lt;210&gt; 2509

&lt;211&gt; 882

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2509

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gcagcattat accagccggt tatgagtaga ccggctaagt ttgaagatga ctttaggatc    120
gcatggtccg atactcatat cactcaaatt gacggaggca gagccattca gctcaaattg    180
gaccctagct caggatgtgg atttgcttcg aagaagcaat acttgctcgg ccgtgtgagc    240
atgaaaaatca aactgatccc cgggtattct gccgggactg tctactgcctt ctacatgaat    300
tcagataccg attcgggtacg agacgagctt gattttgagt tcttaggaaa tcgaagtgga    360
caaccttaca cagtgcaaac caatgtgttt gctcatggta aaggcgatag agagcaaaga    420
gttaaccttt ggttcgacct ttctcgtgat ttccacgaat atgccatctc atggaaccat    480
ctccgtattg tcttctacgt agacaatgtg cccatcaggg ttacaagaa caatgaggca    540
aggaaagtac catacccaag attccaacca atgggtgtat attccacgtt atgggaagcc    600
gatgattggg cgacacgtgg aggaatagag aaatcaatt ggtcgagagc gccattttat    660
gcttattaca aagattttga tatagaagga tgtccggttc caggaccgcg agattgtccc    720
gctaattcga agaattggtg ggaaggcagt gcgtaccacc agttgagtcg ggtggaagct    780
cgaagtata gatgggtccg agtgaaccat atgggtctacg attattgcac tgacaaatct    840
cgttttcctg ttccacctcc agaatgctcg gctggaatct ga                        882

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&lt;210&gt; 2510

&lt;211&gt; 293

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2510

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Met Val Val Ser Leu Phe Ser Ser Arg Asn Val Phe Tyr Thr Leu Ser
1           5           10
Leu Cys Leu Phe Ala Ala Leu Tyr Gln Pro Val Met Ser Arg Pro Ala
                20           25           30

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Lys Phe Glu Asp Asp Phe Arg Ile Ala Trp Ser Asp Thr His Ile Thr  
           35                          40                          45  
 Gln Ile Asp Gly Gly Arg Ala Ile Gln Leu Lys Leu Asp Pro Ser Ser  
           50                          55                          60  
 Gly Cys Gly Phe Ala Ser Lys Lys Gln Tyr Leu Phe Gly Arg Val Ser  
           65                          70                          75                          80  
 Met Lys Ile Lys Leu Ile Pro Gly Asp Ser Ala Gly Thr Val Thr Ala  
                           85                          90                          95  
 Phe Tyr Met Asn Ser Asp Thr Asp Ser Val Arg Asp Glu Leu Asp Phe  
                          100                         105                         110  
 Glu Phe Leu Gly Asn Arg Ser Gly Gln Pro Tyr Thr Val Gln Thr Asn  
                          115                         120                         125  
 Val Phe Ala His Gly Lys Gly Asp Arg Glu Gln Arg Val Asn Leu Trp  
          130                         135                         140  
 Phe Asp Pro Ser Arg Asp Phe His Glu Tyr Ala Ile Ser Trp Asn His  
          145                         150                         155                         160  
 Leu Arg Ile Val Phe Tyr Val Asp Asn Val Pro Ile Arg Val Tyr Lys  
                          165                         170                         175  
 Asn Asn Glu Ala Arg Lys Val Pro Tyr Pro Arg Phe Gln Pro Met Gly  
                          180                         185                         190  
 Val Tyr Ser Thr Leu Trp Glu Ala Asp Asp Trp Ala Thr Arg Gly Gly  
          195                         200                         205  
 Ile Glu Lys Ile Asn Trp Ser Arg Ala Pro Phe Tyr Ala Tyr Tyr Lys  
          210                         215                         220  
 Asp Phe Asp Ile Glu Gly Cys Pro Val Pro Gly Pro Ala Asp Cys Pro  
          225                         230                         235                         240  
 Ala Asn Ser Lys Asn Trp Trp Glu Gly Ser Ala Tyr His Gln Leu Ser  
                          245                         250                         255  
 Pro Val Glu Ala Arg Ser Tyr Arg Trp Val Arg Val Asn His Met Val  
          260                         265                         270  
 Tyr Asp Tyr Cys Thr Asp Lys Ser Arg Phe Pro Val Pro Pro Pro Glu  
          275                         280                         285

Cys Ser Ala Gly Ile  
290

<210> 2511  
<211> 1329  
<212> DNA  
<213> Arabidopsis thaliana

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<400> 2511
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cttcattgtg atgcatgtaa gaatctggta aaatccggag agaagcttgt aatcagtcac      180
gaggctatag agcctcctgt agcttttctc gagtcccttg ttctcggaga gtgggaggat      240
aggttccaaa gaggactttt tcgctatgat gtcactgcct gcgaaccaa agttatcccg      300
gggaagtatg gtttcgttgc tcagcttaac gagggtcgtc acttgaagaa gaggccaact      360
gagttccgtg tagataaggt gttgcagtct ttgatggca gcaaattcaa cttactaaa      420
gttgggcaag aagagtgtct cttccagttt gaagctggtg aagatgccca agttcagttc      480
ttcccttgca tgcctattga ccctgagaat tctcccagtg ttgttgccat caatgttagt      540
ccgatagagt atggccatgt gctgctgatt cctcgtgttc ttgactgctt gcctcaaagg      600
atcgatcaca aaagcctttt gcttgcagtt cacatggctg ctgaggctgc taatccatac      660
ttcagactcg gttacaacag cttgggtgct ttggccacta tcaatcatct ccactttcag      720
gcttattact tggccatgcc ttcccactg gagaagctc ctaccaagaa gataactacc      780
actgttagtg gtgtcaaaa ctcagagctt ctaagttacc ctgtgagaag tcttctcttt      840
gaagggtgaa gctctatgca agaactatct gatactgttt cagactgctg tgtttgcctt      900
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gattacgaag gtgcttcaga ggataacgct tggaggctcc ttgcggaagc ttctctgtcg      1140
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gaggaggatc ttgaaggaa ccatagttcat cagcaaaact ctagtggcaa tgttaaccag      1260
aaaagcaaca gaacctatg aggtccgatc acaaatggga cgccgccga gtgccttgct      1320
cttcagtga                                     1329

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&lt;210&gt; 2512

&lt;211&gt; 442

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2512

Met Leu Lys Ile Lys Arg Val Pro Thr Val Val Ser Asn Tyr Gln Lys  
 1 5 10 15

Asp Asp Gly Ala Glu Asp Pro Val Gly Cys Gly Arg Asn Cys Leu Gly  
 20 25 30

Ala Cys Cys Leu Asn Gly Ala Arg Leu Pro Leu Tyr Ala Cys Lys Asn  
 35 40 45

Leu Val Lys Ser Gly Glu Lys Leu Val Ile Ser His Glu Ala Ile Glu  
 50 55 60

Pro Pro Val Ala Phe Leu Glu Ser Leu Val Leu Gly Glu Trp Glu Asp  
 65 70 75 80

Arg Phe Gln Arg Gly Leu Phe Arg Tyr Asp Val Thr Ala Cys Glu Thr  
 85 90 95

Lys Val Ile Pro Gly Lys Tyr Gly Phe Val Ala Gln Leu Asn Glu Gly  
 100 105 110

Arg His Leu Lys Lys Arg Pro Thr Glu Phe Arg Val Asp Lys Val Leu  
 115 120 125

Gln Ser Phe Asp Gly Ser Lys Phe Asn Phe Thr Lys Val Gly Gln Glu  
 130 135 140

Glu Leu Leu Phe Gln Phe Glu Ala Gly Glu Asp Ala Gln Val Gln Phe  
 145 150 155 160

Phe Pro Cys Met Pro Ile Asp Pro Glu Asn Ser Pro Ser Val Val Ala  
 165 170 175

Ile Asn Val Ser Pro Ile Glu Tyr Gly His Val Leu Leu Ile Pro Arg  
 180 185 190

Val Leu Asp Cys Leu Pro Gln Arg Ile Asp His Lys Ser Leu Leu Leu  
 195 200 205

047-E2F-PCT.ST25.txt

Ala Val His Met Ala Ala Glu Ala Ala Asn Pro Tyr Phe Arg Leu Gly  
210 215

Tyr Asn Ser Leu Gly Ala Phe Ala Thr Ile Asn His Leu His Phe Gln  
225 230 235 240

Ala Tyr Tyr Leu Ala Met Pro Phe Pro Leu Glu Lys Ala Pro Thr Lys  
245 250 255

Lys Ile Thr Thr Val Ser Gly Val Lys Ile Ser Glu Leu Ser  
260 265 270

Tyr Pro Val Arg Ser Leu Leu Phe Glu Gly Gly Ser Ser Met Gln Glu  
275 280 285

Leu Ser Asp Thr Val Ser Asp Cys Cys Val Cys Leu Gln Asn Asn Asn  
290 295 300

Ile Pro Phe Asn Ile Leu Ile Ser Asp Cys Gly Arg Gln Ile Phe Leu  
305 310 315 320

Met Pro Gln Cys Tyr Ala Glu Lys Gln Ala Leu Gly Glu Val Ser Pro  
325 330 335

Glu Val Leu Glu Thr Gln Val Asn Pro Ala Val Trp Glu Ile Ser Gly  
340 345 350

His Met Val Leu Lys Arg Lys Glu Asp Tyr Glu Gly Ala Ser Glu Asp  
355 360 365

Asn Ala Trp Arg Leu Leu Ala Glu Ala Ser Leu Ser Glu Glu Arg Phe  
370 375 380

Lys Glu Val Thr Ala Leu Ala Phe Glu Ala Ile Gly Cys Ser Asn Gln  
385 390 395 400

Glu Glu Asp Leu Glu Gly Thr Ile Val His Gln Gln Asn Ser Ser Gly  
405 410 415

Asn Val Asn Gln Lys Ser Asn Arg Thr His Gly Gly Pro Ile Thr Asn  
420 425 430

Gly Thr Ala Ala Glu Cys Leu Val Leu Gln  
435 440

<210> 2513

&lt;211&gt; 1137

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2513

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atgacagcta aaacaaaaga gaagaaaaaa aatggaaaaa gtagaagact aaggaagaag      180
tttcaagttt ctgattcaga ttctgatgaa acttcggcta gagctgatga atctagcaat      240
gaggattctg tagaagtact taacaatggt aatgagccca agatcgcgaa ggtccattct      300
tcagagagtc ctctgccttc aagggttacg aggtcgaaag caagaaaatc gactttggaa      360
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ctggataata gggaggataa accattggat gatgctaaac tgtctcccg tccagaaagac      480
tgtgaaattc tttcgaagaa aaaaagaaac aaggaaaggt ctaagagttc agctataatt      540
attgactcag atgacggaga ggggaaaaat atgcctgaaa gtcttcagaa tgagaatcca      600
gtttctgaca aggggatcaa atcatcaagt gatgtattac tttctcagaa tgggtgatgca      660
actctatcaa agaaaaagaa gaaaagggat aggagagagg aaactacaga tgtcccgga      720
tgtccagaga agaagaacaa agctatcgac aagaacatcg agaaagaagc tgggtactaag      780
aaaccactag aaacgaggac ttatatcaat ggagtgatca ttgaagatat tgaaaaagga      840
aagttagatg gaaaatcagc tgttaaaggg aaaaagggtc gtatactcta tactgggaag      900
ttgaaagaca ccgggaactt gtttgattca aacttgggag aagatccact aagattccgc      960
ttaggtggag aaaatgtcat agaaggtctc agcattgggt ttgaaggaat gcgagttggt    1020
gataagagaa gactcataat accgccagcc ctcggttact caaaaagggg attgaaggaa    1080
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&lt;210&gt; 2514

&lt;211&gt; 378

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2514

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Met Glu Lys Gly Ser Ser Asp Asp Tyr Asp Tyr Ser Asp Ser Phe Ile
1          5          10          15

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047-E2F-PCT.ST25.txt

Asn Asp Asp Asp Pro Ala Val Arg Gly Ser His Val Ser Thr Asp  
20 25 30

Asp Asp Glu Ile Ser Ile Lys Glu Met Thr Ala Lys Thr Lys Glu Lys  
35 40 45

Lys Lys Asn Gly Lys Gly Arg Arg Leu Arg Lys Lys Phe Gln Val Ser  
50 55 60

Asp Ser Asp Ser Asp Glu Thr Ser Ala Arg Ala Asp Glu Ser Ser Asn  
65 70 75 80

Glu Asp Ser Val Glu Val Leu Asn Asn Gly Asn Glu Pro Lys Ile Ala  
85 90 95

Lys Val His Ser Ser Glu Ser Pro Leu Pro Ser Arg Val Thr Arg Ser  
100 105 110

Lys Ala Arg Lys Ser Thr Leu Glu Ser Gly Glu Pro Ala Lys Cys Glu  
115 120 125

Lys Thr Phe Glu Ala Lys Ile Asn Thr His Lys Thr Leu Asp Asn Arg  
130 135 140

Glu Asp Lys Pro Leu Asp Asp Ala Lys Leu Ser Pro Val Gln Lys Asp  
145 150 155 160

Cys Glu Ile Leu Ser Lys Lys Lys Arg Asn Lys Glu Arg Ser Lys Ser  
165 170 175

Ser Ala Ile Ile Ile Asp Ser Asp Asp Gly Glu Gly Lys Asn Met Pro  
180 185 190

Glu Ser Leu Gln Asn Glu Asn Pro Val Ser Asp Lys Gly Ile Lys Ser  
195 200 205

Ser Ser Asp Val Leu Leu Ser Gln Asn Gly Asp Ala Thr Leu Ser Lys  
210 215 220

Lys Lys Lys Lys Arg Asp Arg Arg Glu Glu Thr Thr Asp Val Pro Glu  
225 230 235 240

Cys Pro Glu Lys Lys Lys Gln Ala Ile Asp Lys Asn Ile Glu Lys Glu  
245 250 255

Ala Gly Thr Lys Lys Pro Leu Glu Thr Arg Thr Leu Ser Asn Gly Val  
260 265 270

Ile Ile Glu Asp Ile Glu Lys Gly Lys Leu Asp Gly Lys Ser Ala Val  
 275 280 285

Lys Gly Lys Lys Val Ser Ile Leu Tyr Thr Gly Lys Leu Lys Asp Thr  
 290 295 300

Gly Asn Leu Phe Asp Ser Asn Leu Gly Glu Asp Pro Leu Arg Phe Arg  
 305 310 315 320

Leu Gly Gly Glu Asn Val Ile Glu Gly Leu Ser Ile Gly Val Glu Gly  
 325 330 335

Met Arg Val Gly Asp Lys Arg Arg Leu Ile Ile Pro Pro Ala Leu Gly  
 340 345 350

Tyr Ser Lys Arg Gly Leu Lys Glu Lys Val Pro Lys Ser Ala Trp Leu  
 355 360 365

Val Tyr Glu Val Glu Ala Val Lys Ile Arg  
 370 375

<210> 2515

<211> 792

<212> DNA

<213> Arabidopsis thaliana

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 gatctagctg cctccgggat agacatgacc aggtcaatca cagatatatc cacatgcgaa 180  
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 aaaatctctg tttctgtctt tgtgactgct atgatgccag acaccaaaca ctaccatcc 360  
 ttcgtatggg ataagctaag aaaagaaact tcacgagagg aatgggttaga caccgtgttt 420  
 acgagcgaga aacctgattt tcctagcgag ttttggattt ttggaccaga atctatggcc 480  
 aagaacttgt atcagttgtc tccagtccaa gatcttgaat tggcgaaat gttggtgagg 540  
 gcaaacccat tgattaagaa agatatggca gagagaagaa gcttcagtga ggaaggatac 600  
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cagcgatcga tgatcagcaa ctttcccca aaagaagtaa tggagatcaa agacgcagat 720  
 catatgccaa tgttctccaa gcctcaacaa ctatgtgctc ttctcttggga gattgcaaat 780  
 aaatatgcct aa 792

<210> 2516

<211> 263

<212> PRT

<213> Arabidopsis thaliana

<400> 2516

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Cys His Gly Ala 20 Trp Cys Trp Tyr 25 Lys Val Lys Pro Gln Leu 30 Glu Ala

Ser Gly His 35 Arg Val Thr Ala Val 40 Asp Leu Ala Ala 45 Ser Gly Ile Asp

Met Thr 50 Arg Ser Ile Thr 55 Asp Ile Ser Thr Cys 60 Glu Gln Tyr Ser Glu

Pro Leu Met Gln Leu 70 Met Thr Ser Leu Pro 75 Asp Asp Glu Lys Val 80 Val 65

Leu Val Gly His 85 Ser Leu Gly Gly Leu 90 Ser Leu Ala Met Ala 95 Met Asp

Met Phe Pro Thr 100 Lys Ile Ser Val 105 Ser Val Phe Val Thr Ala 110 Met Met

Pro Asp Thr 115 Lys His Ser Pro 120 Ser Phe Val Trp Asp Lys 125 Leu Arg Lys

Glu Thr Ser Arg Glu Glu 130 Trp Leu Asp Thr Val 140 Phe Thr Ser Glu Lys

Pro Asp Phe Pro Ser 150 Glu Phe Trp Ile Phe 155 Gly Pro Glu Phe Met Ala 160

Lys Asn Leu Tyr 165 Gln Leu Ser Pro Val 170 Gln Asp Leu Glu Leu 175 Ala Lys

Met Leu Val Arg Ala Asn Pro Leu Ile Lys Lys Asp Met Ala Glu Arg  
 180 185 190

Arg Ser Phe Ser Glu Glu Gly Tyr Gly Ser Val Thr Arg Ile Phe Ile  
 195 200 205

Val Cys Gly Lys Asp Leu Val Ser Pro Glu Asp Tyr Gln Arg Ser Met  
 210 215 220

Ile Ser Asn Phe Pro Pro Lys Glu Val Met Glu Ile Lys Asp Ala Asp  
 225 230 235 240

His Met Pro Met Phe Ser Lys Pro Gln Gln Leu Cys Ala Leu Leu Leu  
 245 250 255

Glu Ile Ala Asn Lys Tyr Ala  
 260

<210> 2517

<211> 588

<212> DNA

<213> Arabidopsis thaliana

<400> 2517  
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 tgctcattga gaggtcgaaa ctacgtaagg ccagaagtta aacaacgcaa cttctcaaaa 120  
 gatgaagacg atctcatcct caagcttcat gcacttcttg gcaatagatg gtcattgata 180  
 gcgggaagat tgccaggacg aaccgacaac gaagtttagga tccattggga aacttaccta 240  
 aaaaggaagc tcgtaaaaat gggaatcgac ccaaccaatc atcgctctcca ccatcacacc 300  
 aactacattt ctagacgtca cctccattct tcacataagg aacatgaaac caagattatt 360  
 agtgatcaat cttcttcggt atccgaatca tgtggtgtaa caattttgcc cattccaagt 420  
 accaattgct cggaggatag tactagtacc ggacgaagtc atttgctga cctaacatt 480  
 ggtctcatcc cggccgtgac ttctttgcca gctctttgcc ttcaggactc tagcgaatcc 540  
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<210> 2518

<211> 195

<212> PRT

<213> Arabidopsis thaliana

&lt;400&gt; 2518

Met Asn Lys Thr Arg Leu Arg Ala Leu Ser Pro Pro Ser Gly Met Gln  
1 5 10 15His Arg Lys Arg Cys Arg Leu Arg Gly Arg Asn Tyr Val Arg Pro Glu  
20 25 30Val Lys Gln Arg Asn Phe Ser Lys Asp Glu Asp Asp Leu Ile Leu Lys  
35 40 45Leu His Ala Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Leu  
50 55 60Pro Gly Arg Thr Asp Asn Glu Val Arg Ile His Trp Glu Thr Tyr Leu  
65 70 75 80Lys Arg Lys Leu Val Lys Met Gly Ile Asp Pro Thr Asn His Arg Leu  
85 90 95His His His Thr Asn Tyr Ile Ser Arg Arg His Leu His Ser Ser His  
100 105 110Lys Glu His Glu Thr Lys Ile Ile Ser Asp Gln Ser Ser Val Ser  
115 120 125Glu Ser Cys Gly Val Thr Ile Leu Pro Ile Pro Ser Thr Asn Cys Ser  
130 135 140Glu Asp Ser Thr Ser Thr Gly Arg Ser His Leu Pro Asp Leu Asn Ile  
145 150 155 160Gly Leu Ile Pro Ala Val Thr Ser Leu Pro Ala Leu Cys Leu Gln Asp  
165 170 175Ser Ser Glu Ser Ser Thr Asn Gly Ser Thr Gly Gln Glu Thr Leu Leu  
180 185 190Leu Phe Arg  
195

&lt;210&gt; 2519

&lt;211&gt; 858

&lt;212&gt; DNA



<213> *Arabidopsis thaliana*

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<400> 2519
atggccgccg ttagtagttc gtcggagacc ggagactgcg gcgttacggg aaagagagat    60
gagatcatgt tgttcggagt tagagtcgtg gttgatccga tgagaaagtg tgtgagtttg    120
aacaatctct ctgattatga aaagtcttct cgggaggatg agatccctaa gatagtcacc    180
gccggagctg gagatggtag agataagaac gaaacggatg cgacggtgat tgtcctgac    240
ggttacgctt ccgccaatga cgctgtccag atttcgtctt ctccggcggg gaggaaacga    300
ggggttccat ggacagagaa cgagcataag aggttcttga ttgggttgca gaaagtagga    360
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gttagtcatg ctcagaaata ctccctccga cgaaccaacc tcaaccgtcg ccgaagaaga    480
tctagccttt ttgatatcac tactgagacg gttacagaaa tggccatgga gcaagatcct    540
actcaggaga actcaccact acctgaaacc aacatcagct ctggacagca agcgatgcaa    600
gtttttactg acgtgccgac aaaaactgag aatgcaccag agacatttca tctcaacgat    660
ccatatctgg ttccagtaac ctccaagca aagccaacat tcaatctaaa cacagatgct    720
gtccaccttt ctctcaacct ttgtctggca tcctcattta atcttaacga gcaacccaac    780
tcaagacact cggctttcac gatgatgcca agcttcagcg atggagatag caatagcagc    840
atcatcagag ttgcttag                                     858

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&lt;210&gt; 2520

&lt;211&gt; 285

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2520

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Met Ala Ala Val Ser Ser Ser Glu Thr Gly Asp Cys Gly Val Thr
 1          5          10
Gly Lys Arg Asp Glu Ile Met Leu Phe Gly Val Arg Val Val Asp
 20          25          30
Pro Met Arg Lys Cys Val Ser Leu Asn Asn Leu Ser Asp Tyr Glu Lys
 35          40          45
Ser Ser Pro Glu Asp Glu Ile Pro Lys Ile Val Thr Ala Gly Ala Gly
 50          55          60

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047-E2F-PCT.ST25.txt

Asp Gly Glu Asp Lys Asn Glu Thr Asp Ala Thr Val Ile Val Ala Asp  
 65 70 75 80  
 Gly Tyr Ala Ser Ala Asn Asp Ala Val Gln Ile Ser Ser Ser Ser Gly  
 85 90 95  
 Gly Arg Lys Arg Gly Val Pro Trp Thr Glu Asn Glu His Lys Arg Phe  
 100 105 110  
 Leu Ile Gly Leu Gln Lys Val Gly Lys Gly Asp Trp Lys Gly Ile Ser  
 115 120 125  
 Arg Asn Phe Val Lys Ser Arg Thr Pro Thr Gln Val Ala Ser His Ala  
 130 135 140  
 Gln Lys Tyr Phe Leu Arg Arg Thr Asn Leu Asn Arg Arg Arg Arg Arg  
 145 150 155 160  
 Ser Ser Leu Phe Asp Ile Thr Thr Glu Thr Val Thr Glu Met Ala Met  
 165 170 175  
 Glu Gln Asp Pro Thr Gln Glu Asn Ser Pro Leu Pro Glu Thr Asn Ile  
 180 185 190  
 Ser Ser Gly Gln Gln Ala Met Gln Val Phe Thr Asp Val Pro Thr Lys  
 195 200 205  
 Thr Glu Asn Ala Pro Glu Thr Phe His Leu Asn Asp Pro Tyr Leu Val  
 210 215 220  
 Pro Val Thr Phe Gln Ala Lys Pro Thr Phe Asn Leu Asn Thr Asp Ala  
 225 230 235 240  
 Ala Pro Leu Ser Leu Asn Leu Cys Leu Ala Ser Ser Phe Asn Leu Asn  
 245 250 255  
 Glu Gln Pro Asn Ser Arg His Ser Ala Phe Thr Met Met Pro Ser Phe  
 260 265 270  
 Ser Asp Gly Asp Ser Asn Ser Ser Ile Ile Arg Val Ala  
 275 280 285

<210> 2521

<211> 900

<212> DNA

<213> *Arabidopsis thaliana*

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<400> 2521
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tcagtgaatg cctattggcc accatcacct ggttattggc caagctccaa ggttggttcc    120
ctcaacttct acaaagggtt taggaatctt tggggtcctc agcatcagag aatggacca    180
aatgccctca ccatctggct tgatagaacc tcaggaagtg gattcaagtc agtgaagcca    240
ttcagatcag gctactttgg agcaaacatc aaactccaac ctggctacac tgctggagtc    300
atcacatctc tctatctatc aaataatgag gcacatccag ggttccatga tgaggtagac    360
atagaathtt tggggacaac atttggaag ccttacacac ttcagacaaa tgtgtatatt    420
agaggaagtg gtgatgggaa aatcattggc cgtgagatga agtttcgctt gtggtttgat    480
ccaactaaag attttcacca ttatgctatt ctttggagcc ctagagaaat catatttttg    540
gtggatgata ttcccataag aagataccca aagaagagtg cgtctacatt tcctttaaga    600
ccaatgtggc tttatgggtc catatgggat gcttcttctt gggcaacgga agacggtaaa    660
tacaagcgcg actataaata tcaaccttct actgctaaat acaccaattt taaagcgctc    720
ggctgcacgg cctactcgct agctcgggtc tatccgttgt cggttcgcgc ataccgttct    780
ggcggattaa cccgacaaca acaccaagcc atgagatggg ttcaaacaca tagtatggta    840
tacaattatt gcaaagatta taagcgagac cattctttaa cgccggaatg ttggcgtag    900

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&lt;210&gt; 2522

&lt;211&gt; 299

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2522

```

Met Gly Asn Ser Leu Ile Ser Leu Leu Ser Ile Phe His Leu Leu Val
1           5           10           15

Leu Trp Gly Ser Ser Val Asn Ala Tyr Trp Pro Pro Ser Pro Gly Tyr
20           25           30

Trp Pro Ser Ser Lys Val Gly Ser Leu Asn Phe Tyr Lys Gly Phe Arg
35           40           45

Asn Leu Trp Gly Pro Gln His Gln Arg Met Asp Gln Asn Ala Leu Thr
50           55           60

```

047-E2F-PCT.ST25.txt

Ile Trp Leu Asp Arg Thr Ser Gly Ser Gly Phe Lys Ser Val Lys Pro  
65 70 75 80

Phe Arg Ser Gly Tyr Phe Gly Ala Asn Ile Lys Leu Gln Pro Gly Tyr  
85 90 95

Thr Ala Gly Val Ile Thr Ser Leu Tyr Leu Ser Asn Asn Glu Ala His  
100 105 110

Pro Gly Phe His Asp Glu Val Asp Ile Glu Phe Leu Gly Thr Thr Phe  
115 120 125

Gly Lys Pro Tyr Thr Leu Gln Thr Asn Val Tyr Ile Arg Gly Ser Gly  
130 135 140

Asp Gly Lys Ile Ile Gly Arg Glu Met Lys Phe Arg Leu Trp Phe Asp  
145 150 155 160

Pro Thr Lys Asp Phe His His Tyr Ala Ile Leu Trp Ser Pro Arg Glu  
165 170 175

Ile Ile Phe Leu Val Asp Asp Ile Pro Ile Arg Arg Tyr Pro Lys Lys  
180 185 190

Ser Ala Ser Thr Phe Pro Leu Arg Pro Met Trp Leu Tyr Gly Ser Ile  
195 200 205

Trp Asp Ala Ser Ser Trp Ala Thr Glu Asp Gly Lys Tyr Lys Ala Asp  
210 215 220

Tyr Lys Tyr Gln Pro Phe Thr Ala Lys Tyr Thr Asn Phe Lys Ala Leu  
225 230 235 240

Gly Cys Thr Ala Tyr Ser Ser Ala Arg Cys Tyr Pro Leu Ser Ala Ser  
245 250 255

Pro Tyr Arg Ser Gly Gly Leu Thr Arg Gln Gln His Gln Ala Met Arg  
260 265 270

Trp Val Gln Thr His Ser Met Val Tyr Asn Tyr Cys Lys Asp Tyr Lys  
275 280 285

Arg Asp His Ser Leu Thr Pro Glu Cys Trp Arg  
290 295

<210> 2523

&lt;211&gt; 1236

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2523

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tcaacaccta tcctatctcc gcctccttcc accgctttct ccgtcatcgt acctcgtcgg 120
agatgtctca gattggttac ttcttggtgc tccaccgttc aaagctccgt cgcaacaaac 180
ggttcctctc cagctcctgc tccggccgct gttgtcgttg agcgtgacca gattcgtctt 240
ggtcttccta gtaaaggacg tatggctgct gatgcaatcg atcttctcaa ggactgtcaa 300
ctgtttgtta aacaagtcaa tcctaggcaa tatgttgac agattcccca gttaccaaac 360
actgaagtct ggtttcaacg gccaaaagat attgtcagaa agttactctc aggagatttg 420
gatctaggta tcgttggtct tgacacactt agtgaatatg gtcaggaaaa tgaagatctt 480
atcattgtcc atgaagctct caactttgga gactgtcacc tgtctattgc gattccaaac 540
tatgggatat ttgagaatat aaattctctg aaggagctag cgcaaatgcc ccaattggagt 600
gaagagagac ccttacgctt agctactggc ttcacttatc tcggcccaa atttatgaaa 660
gaaaatggca taaagcatgt ggtgttttca actgcagacg gactgtgga ggcagctcca 720
gcgatgggga tagctgatgc cattttggat cttgtgagta gtggtataac actcaaagag 780
aacaacttga aagaaattga aggaggtggt gtgctggaaa gccaggcggc acttgtggca 840
agtagaagag cattaaacga gagaaaaggg gcactaaaca cagtacacga gattcttgag 900
agattggagg cccatctaaa ggcggatggc caattcactg ttgttgcaaa catgagagga 960
aatagtgtct aggaagtggc tgagcgtgtg ctgagccaac catcattgtc aggattgcag 1020
ggaccgacaa taagcccgat gtactgtaca caaaatggaa aagtatcggt tgactactat 1080
gccatcgtga tttgtgtacc aaaaaaggcc ctatacgact ctgtgaagca acttagagcg 1140
gccggaggga gtgggttatt agtttcacct ttgacctaca tttttgatga ggatactcca 1200
agatggggtc agctcctgag aaacctcggg atttaa 1236

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&lt;210&gt; 2524

&lt;211&gt; 411

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2524

047-E2F-PCT.ST25.txt

Met Ser Leu Leu Leu Pro Thr Asn Leu Gln Gln Tyr Pro Ser Ser Ser  
1 5 10 15

Ser Phe Pro Ser Ser Thr Pro Ile Leu Ser Pro Pro Pro Ser Thr Ala  
20 25 30

Phe Ser Val Ile Val Pro Arg Arg Arg Cys Leu Arg Leu Val Thr Ser  
35 40 45

Cys Val Ser Thr Val Gln Ser Ser Val Ala Thr Asn Gly Ser Ser Pro  
50 55 60

Ala Pro Ala Pro Ala Ala Val Val Val Glu Arg Asp Gln Ile Arg Leu  
65 70 75 80

Gly Leu Pro Ser Lys Gly Arg Met Ala Ala Asp Ala Ile Asp Leu Leu  
85 90 95

Lys Asp Cys Gln Leu Phe Val Lys Gln Val Asn Pro Arg Gln Tyr Val  
100 105 110

Ala Gln Ile Pro Gln Leu Pro Asn Thr Glu Val Trp Phe Gln Arg Pro  
115 120 125

Lys Asp Ile Val Arg Lys Leu Leu Ser Gly Asp Leu Asp Leu Gly Ile  
130 135 140

Val Gly Leu Asp Thr Leu Ser Glu Tyr Gly Gln Glu Asn Glu Asp Leu  
145 150 155 160

Ile Ile Val His Glu Ala Leu Asn Phe Gly Asp Cys His Leu Ser Ile  
165 170 175

Ala Ile Pro Asn Tyr Gly Ile Phe Glu Asn Ile Asn Ser Leu Lys Glu  
180 185 190

Leu Ala Gln Met Pro Gln Trp Ser Glu Glu Arg Pro Leu Arg Leu Ala  
195 200 205

Thr Gly Phe Thr Tyr Leu Gly Pro Lys Phe Met Lys Glu Asn Gly Ile  
210 215 220

Lys His Val Val Phe Ser Thr Ala Asp Gly Ala Leu Glu Ala Ala Pro  
225 230 235 240

Ala Met Gly Ile Ala Asp Ala Ile Leu Asp Leu Val Ser Ser Gly Ile  
245 250 255

047-E2F-PCT.ST25.txt

Thr Leu Lys Glu Asn Asn Leu Lys Glu Ile Glu Gly Gly Val Val Leu  
260 265 270  
Glu Ser Gln Ala Ala Leu Val Ala Ser Arg Arg Ala Leu Asn Glu Arg  
275 280 285  
Lys Gly Ala Leu Asn Thr Val His Glu Ile Leu Glu Arg Leu Glu Ala  
290 295 300  
His Leu Lys Ala Asp Gly Gln Phe Thr Val Val Ala Asn Met Arg Gly  
305 310 315 320  
Asn Ser Ala Gln Glu Val Ala Glu Arg Val Leu Ser Gln Pro Ser Leu  
325 330 335  
Ser Gly Leu Gln Gly Pro Thr Ile Ser Pro Val Tyr Cys Thr Gln Asn  
340 345 350  
Gly Lys Val Ser Val Asp Tyr Tyr Ala Ile Val Ile Cys Val Pro Lys  
355 360 365  
Lys Ala Leu Tyr Asp Ser Val Lys Gln Leu Arg Ala Ala Gly Gly Ser  
370 375 380  
Gly Val Leu Val Ser Pro Leu Thr Tyr Ile Phe Asp Glu Asp Thr Pro  
385 390 395 400  
Arg Trp Gly Gln Leu Leu Arg Asn Leu Gly Ile  
405 410

<210> 2525

<211> 552

<212> DNA

<213> Arabidopsis thaliana

<400> 2525  
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ctctccggtc tctcccttat ctctctctac actctcaca tcgcaaccgc ggtatccggc 180  
tgctcgatct tcgcctcttc cacatccgcc accgcgagcg atagattata cggttcacac 240  
atggtagcca cagtcctcac ggccattttc caaggcgtgt tctctgttct gatattcacg 300

## 047-E2F-PCT.ST25.txt

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agaacagggg atttccttag gttcttgaaa tcttatgttc gggaagaaga cggggaagtg 360
atacttaaac tctctgggtg tttgtgtgta ttgatgtttt gcttagagtg gattgttctt 420
gtgttagcgt ttttgttgaa gtatagtgat tatttggatg agagtgttgt agatgatgat 480
gattttaagg tgaggaggca agaagaagat ctcaaggatt ggccttctta cccatttcaa 540
ctcaagattt aa 552

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&lt;210&gt; 2526

&lt;211&gt; 183

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2526

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Met Gly Met Ser Lys Ser Lys Gly Asn Thr His Asn Ile Phe Leu Leu
1      5      10
Cys Asn Tyr Ile Leu Leu Gly Ser Ala Ser Ser Cys Ile Phe Leu Thr
20     25     30
Ile Ser Leu Arg Leu Phe Pro Ser Leu Ser Gly Leu Ser Leu Ile Phe
35     40     45
Leu Tyr Thr Leu Thr Ile Ala Thr Ala Val Ser Gly Cys Ser Ile Phe
50     55     60
Ala Ser Ser Thr Ser Ala Thr Ala Ser Asp Arg Leu Tyr Gly Ser His
65     70     75     80
Met Val Ala Thr Val Leu Thr Ala Ile Phe Gln Gly Ala Val Ser Val
85     90     95
Leu Ile Phe Thr Arg Thr Gly Asp Phe Leu Arg Phe Leu Lys Ser Tyr
100    105    110
Val Arg Glu Glu Asp Gly Glu Val Ile Leu Lys Leu Ser Gly Gly Leu
115    120    125
Cys Val Leu Met Phe Cys Leu Glu Trp Ile Val Leu Val Leu Ala Phe
130    135    140
Leu Leu Lys Tyr Ser Asp Tyr Leu Asp Glu Ser Val Val Asp Asp Asp
145    150    155    160

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Asp Phe Lys Val Arg Arg Gln Glu Glu Asp Leu Lys Asp Trp Pro Ser  
 165 170 175

Tyr Pro Phe Gln Leu Lys Ile  
 180

<210> 2527

<211> 753

<212> DNA

<213> Arabidopsis thaliana

<400> 2527  
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 aaaacttacg gaggatacca caacgtgttc gtgacgacgt tcggagacga aggagagcat 120  
 tgggactcct ttagagtcgt cagcggagag tttcctgacg agaaagatct ggagaaatac 180  
 gatggcttgc ttatcagcgg aagctctcac gatgccttg agaatgatga ttggatcctt 240  
 aagctctgtg atattgtcaa gaaaattgat gagatgaaga agaaaattct tggcatctgc 300  
 tttggtcatc agatcatagc cagggttaagg ggaggaacag tcggaagagc aaagaaggga 360  
 ccagaactta aacttggaga cataaccatc gtcaaggatg cgattacgcc tggaaagttac 420  
 ttcggaacg agattcctga tagcatagcg atcatcaaat gtcaccagga cgaagtgttg 480  
 gtgctgcccg aaactgctaa agtgcttgcg tattccaaga actacgaggt ggagatgtat 540  
 tcgattgagg atcatttgtt ctgtatccaa ggacatcctg agtataacaa agagattctc 600  
 ttcgagattg ttgatcgtgt tcttgctcta ggctacgtca agcaagaatt tgctgatgag 660  
 gctaaggcaa cgatggagaa taggggagca gacaggaagc tttgggagac gatttgcaag 720  
 aacttcctca aaggcagagt tccaactaac tag 753

<210> 2528

<211> 250

<212> PRT

<213> Arabidopsis thaliana

<400> 2528

Met Val Glu Gln Lys Arg Tyr Ala Leu Phe Leu Ala Thr Leu Asp Ser  
 1 5 10 15

Glu Phe Val Lys Lys Thr Tyr Gly Gly Tyr His Asn Val Phe Val Thr  
 Page 3555

Thr Phe Gly Asp Glu Gly Glu His Trp Asp Ser Phe Arg Val Val Ser  
35 40  
Gly Glu Phe Pro Asp Glu Lys Asp Leu Glu Lys Tyr Asp Gly Phe Val  
50 55 60  
Ile Ser Gly Ser Ser His Asp Ala Phe Glu Asn Asp Asp Trp Ile Leu  
65 70 75  
Lys Leu Cys Asp Ile Val Lys Lys Ile Asp Glu Met Lys Lys Lys Ile  
85 90 95  
Leu Gly Ile Cys Phe Gly His Gln Ile Ile Ala Arg Val Arg Gly Gly  
100 105 110  
Thr Val Gly Arg Ala Lys Lys Gly Pro Glu Leu Lys Leu Gly Asp Ile  
115 120 125  
Thr Ile Val Lys Asp Ala Ile Thr Pro Gly Ser Tyr Phe Gly Asn Glu  
130 135 140  
Ile Pro Asp Ser Ile Ala Ile Ile Lys Cys His Gln Asp Glu Val Leu  
145 150 155 160  
Val Leu Pro Glu Thr Ala Lys Val Leu Ala Tyr Ser Lys Asn Tyr Glu  
165 170 175  
Val Glu Met Tyr Ser Ile Glu Asp His Leu Phe Cys Ile Gln Gly His  
180 185 190  
Pro Glu Tyr Asn Lys Glu Ile Leu Phe Glu Ile Val Asp Arg Val Leu  
195 200 205  
Ala Leu Gly Tyr Val Lys Gln Glu Phe Ala Asp Ala Ala Lys Ala Thr  
210 215 220  
Met Glu Asn Arg Gly Ala Asp Arg Lys Leu Trp Glu Thr Ile Cys Lys  
225 230 235 240  
Asn Phe Leu Lys Gly Arg Val Pro Thr Asn  
245 250

&lt;210&gt; 2529

&lt;211&gt; 1074

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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<400> 2529
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ttgttctgtg gaatttgcca cactgatctg agtatggcca aaacgaatg ggggttaact    180
acttatcctc ttgtccttgg gcatgagatt gtgggcgtgg tgactgaagt tggagccaaa    240
gtgaaaaaat tcaacgctgg agacaaagtc ggagttggct atatggccgg ctctgtcagg    300
tcattgtgaca gctgcaatga tggcgacgag aactactgtc caaagatgat cttaacgtcc    360
ggagccaaaa actttgacga taccatgacc catggtggat actccgacca catggtgtgt    420
gctgaggatt tcattcatccg tttctctgac aatctcccat tagacggtgc cgcaccacta    480
ctctgcgccg gggtcacggt ctactcccc atgaagtatc acgggctcga caagcccgggt    540
atgcacatcg gtgtggtggg actaggcggg ttgggcatg tagcagtga atttgctaag    600
gctatgggta ctaaagttac ggttattagt acttcggagc gtaagagaga cgaggccggt    660
actcggcttg gtgcgcatgc cttcttggtg agccgtgacc cgaaacaat gaaggatgca    720
atggggacta tggatggtat cattgatacc gtatctgcga cccatccact tcttcgctg    780
cttggtttgc ttaaaaaataa gggaaaactt gttatggttg gtgcaccagc agaaccgctc    840
gagcttcctg tttttcctct catctttggg cggaagatgg tgggtggtag tatggtagga    900
ggataaaagg agacgcaaga gatggtggat ttggctggaa aacacaacat cacggcggat    960
attgagctca tctctgcgga ttatgtcaac accgccatgg aacggcttgc aaaggctgac   1020
gttaagtacc gatttgtgat tgatgttgcc aacacgatga agccaactcc ttaa       1074

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&lt;210&gt; 2530

&lt;211&gt; 357

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2530

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Met Gly Lys Val 5 Leu Glu Lys Glu Ala Phe Gly Leu Ala Ala Lys Asp
1          5          10          15
Glu Ser Gly Ile Leu Ser Pro Phe Ser Phe Ser Arg Arg Ala Thr Gly
20          25          30

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047-E2F-PCT.ST25.txt

Glu Lys Asp Val Arg Phe Lys Val Leu Phe Cys Gly Ile Cys His Thr  
 35 40 45  
 Asp Leu Ser Met Ala Lys Asn Glu Trp Gly Leu Thr Thr Tyr Pro Leu  
 50 55 60  
 Val Pro Gly His Glu Ile Val Gly Val Val Thr Glu Val Gly Ala Lys  
 65 70 75 80  
 Val Lys Lys Phe Asn Ala Gly Asp Lys Val Gly Val Gly Tyr Met Ala  
 85 90 95  
 Gly Ser Cys Arg Ser Cys Asp Ser Cys Asn Asp Gly Asp Glu Asn Tyr  
 100 105 110  
 Cys Pro Lys Met Ile Leu Thr Ser Gly Ala Lys Asn Phe Asp Asp Thr  
 115 120 125  
 Met Thr His Gly Gly Tyr Ser Asp His Met Val Cys Ala Glu Asp Phe  
 130 135 140  
 Ile Ile Arg Ile Pro Asp Asn Leu Pro Leu Asp Gly Ala Ala Pro Leu  
 145 150 155 160  
 Leu Cys Ala Gly Val Thr Val Tyr Ser Pro Met Lys Tyr His Gly Leu  
 165 170 175  
 Asp Lys Pro Gly Met His Ile Gly Val Val Gly Leu Gly Gly Leu Gly  
 180 185 190  
 His Val Ala Val Lys Phe Ala Lys Ala Met Gly Thr Lys Val Thr Val  
 195 200 205  
 Ile Ser Thr Ser Glu Arg Lys Arg Asp Glu Ala Val Thr Arg Leu Gly  
 210 215 220  
 Ala Asp Ala Phe Leu Val Ser Arg Asp Pro Lys Gln Met Lys Asp Ala  
 225 230 235 240  
 Met Gly Thr Met Asp Gly Ile Ile Asp Thr Val Ser Ala Thr His Pro  
 245 250 255  
 Leu Leu Pro Leu Leu Gly Leu Leu Lys Asn Lys Gly Lys Leu Val Met  
 260 265 270  
 Val Gly Ala Pro Ala Glu Pro Leu Glu Leu Pro Val Phe Pro Leu Ile  
 275 280 285

Phe Gly Arg Lys Met Val Val Gly Ser Met Val Gly Gly Ile Lys Glu  
290 295 300

Thr Gln Glu Met Val Asp Leu Ala Gly Lys His Asn Ile Thr Ala Asp  
305 310 315 320

Ile Glu Leu Ile Ser Ala Asp Tyr Val Asn Thr Ala Met Glu Arg Leu  
325 330 335

Ala Lys Ala Asp Val Lys Tyr Arg Phe Val Ile Asp Val Ala Asn Thr  
340 345 350

Met Lys Pro Thr Pro  
355

<210> 2531

<211> 999

<212> DNA

<213> Arabidopsis thaliana

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tggaacacac acaccgcctc ttctccctt catagccgca gaccctttga aggatttacc 300  
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tccggattgc tttgggagtc acctgagatc gttagcctca acgaccttat tgtttcgggc 420  
gggtcgggta ctcataactt ccgggcccag gatgttctct ctctgcctaa gaatcgtcac 480  
gccacctgcy ggaataacaa agatgagatg atccgacagc tccgtggact atccagatct 540  
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gagatcaaca gtcttgagag gaactctgct ctctctcgct acaaaagaaa gaagaagttc 900

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<210> 2532

<211> 332

<212> PRT

<213> Arabidopsis thaliana

<400> 2532

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Cys Leu Ala Cys Asp Lys Gln Val His Val Ala Asn Gln Leu Phe Ala  
35 40 45

Lys His Phe Arg Ser Leu Leu Cys Asp Ser Cys Asn Glu Ser Pro Ser  
50 55 60

Ser Leu Phe Cys Glu Thr Glu Arg Ser Val Leu Cys Gln Asn Cys Asp  
65 70 75 80

Trp Gln His His Thr Ala Ser Ser Ser Leu His Ser Arg Arg Pro Phe  
85 90 95

Glu Gly Phe Thr Gly Cys Pro Ser Val Pro Glu Leu Leu Ala Ile Val  
100 105 110

Gly Leu Asp Asp Leu Thr Leu Asp Ser Gly Leu Leu Trp Glu Ser Pro  
115 120 125

Glu Ile Val Ser Leu Asn Asp Leu Ile Val Ser Gly Gly Ser Gly Thr  
130 135 140

His Asn Phe Arg Ala Thr Asp Val Pro Pro Leu Pro Lys Asn Arg His  
145 150 155 160

Ala Thr Cys Gly Lys Tyr Lys Asp Glu Met Ile Arg Gln Leu Arg Gly  
165 170 175

Leu Ser Arg Ser Glu Pro Gly Cys Leu Lys Phe Glu Thr Pro Asp Ala  
180 185 190

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Glu Ile Asp Ala Gly Phe Gln Phe Leu Ala Pro Asp Leu Phe Ser Thr  
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Cys Glu Leu Glu Ser Gly Leu Lys Trp Phe Asp Gln Gln Asp His Glu  
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Asp Phe Pro Tyr Cys Ser Leu Leu Lys Asn Leu Ser Glu Ser Asp Glu  
225 230 235 240  
Lys Pro Glu Asn Val Asp Arg Glu Ser Ser Val Met Val Pro Val Ser  
245 250 255  
Gly Cys Leu Asn Arg Cys Glu Glu Glu Thr Val Met Val Pro Val Ile  
260 265 270  
Thr Ser Thr Arg Ser Met Thr His Glu Ile Asn Ser Leu Glu Arg Asn  
275 280 285  
Ser Ala Leu Ser Arg Tyr Lys Glu Lys Lys Lys Ser Arg Arg Tyr Glu  
290 295 300  
Lys His Ile Arg Tyr Glu Ser Arg Lys Val Arg Ala Glu Ser Arg Thr  
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<210> 2533

<211> 582

<212> DNA

<213> Arabidopsis thaliana

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cttggttggt aagatcctat cgatcccggt cagatttaca tgattcaagg cgtattagct 420

atgctgccgt caacgactcc tgatggagaa ttaatgagaa atgggggaga aaagaaaacc 480  
 atttgattg tagaagaaga aggaaagctc tccaataaag cctcgacttc aagaaatttt 540  
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<210> 2534

<211> 193

<212> PRT

<213> Arabidopsis thaliana

<400> 2534

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 20 25 30  
 Thr Leu Glu Ile Pro Ala Ala Ala Pro Pro Ser Leu Trp Leu Asn Gln  
 35 40 45  
 Arg Val Leu Ser Arg Arg Arg Ala Glu Ile Val Leu Ser Asp Gly Gly  
 50 55 60  
 Ser Leu Val Asp Leu Gln Trp Gly Thr Met Thr Leu Asp Asp Gly Ser  
 65 70 75 80  
 Arg Ser Gly Gly Phe Leu Arg Gln Ser Leu Arg Gly Gly Thr Ser Pro  
 85 90 95  
 Pro Met Asn Leu Leu Gly Ser Gly Gly Ser Val Leu Arg Arg Tyr Arg  
 100 105 110  
 Gly Arg Arg Ile Val Val Phe Glu Leu Gly Cys Glu Asp Pro Ile Asp  
 115 120 125  
 Pro Gly Gln Ile Tyr Met Ile Gln Gly Val Leu Ala Met Leu Pro Ser  
 130 135 140  
 Thr Thr Pro Asp Gly Glu Leu Met Arg Asn Gly Gly Glu Lys Lys Thr  
 145 150 155 160  
 Ile Trp Ile Val Glu Glu Glu Gly Lys Leu Ser Asn Lys Ala Ser Thr  
 165 170 175



Ser Arg Asn Phe Cys Leu Ser Pro Val Asp Pro Val Glu Tyr Gln Ser  
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Asp

<210> 2535

<211> 852

<212> DNA

<213> Arabidopsis thaliana

<400> 2535

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gtgaagggca agtccagcca tccgatggag gactatgtag tgtctgaatt caagaaactt	180
gaaggtcatg aattgggttt gtttgctatc tttgatggtc acttggggca tgatgtggct	240
aaatacttgc agactaatct ctttgacaac attcttaaag agaaggattt ttggactgac	300
acagagaatg ctataaggaa tgcctacaga tcaacagatg ccgtgatatt gcagcagttc	360
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ctagtgtgtg ctaatgttgg agactccaga gcagtgtgtg ctaagaatgg tgttgcgcac	480
cagctatctg tcgatcatga accaagcaag gagaaaaaag aaatagagag ccgaggtggc	540
tttgtgtcaa atattccagg ggatgttcca cgagtggatg gacagttagc ggttgcaaga	600
gcatttggag ataagagctt aaagttacat ctgagctcag aaccggacat aacacaccag	660
acaattgatg atcacactga attcatcctt ttcgcaagcg atgggtatttg gaaagtatta	720
tcaaaccaag aagcggttga tgctatcaag agtatcaag atcctcatgc agctgcaaag	780
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<210> 2536

<211> 283

<212> PRT

<213> Arabidopsis thaliana

<400> 2536

Met Ala Gly Ser Asn Ile Leu His Lys Ile Lys Leu Lys Ala Gly Phe  
 Page 3563

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Asn Ile Thr His Gly Phe His Cys Val Lys Gly Lys Ser Ser His Pro  
35 40 45  
Met Glu Asp Tyr Val Val Ser Glu Phe Lys Lys Leu Glu Gly His Glu  
50 55 60  
Leu Gly Leu Phe Ala Ile Phe Asp Gly His Leu Gly His Asp Val Ala  
65 70 75 80  
Lys Tyr Leu Gln Thr Asn Leu Phe Asp Asn Ile Leu Lys Glu Lys Asp  
85 90 95  
Phe Trp Thr Asp Thr Glu Asn Ala Ile Arg Asn Ala Tyr Arg Ser Thr  
100 105 110  
Asp Ala Val Ile Leu Gln Gln Ser Leu Lys Leu Gly Lys Gly Gly Ser  
115 120 125  
Thr Ala Val Thr Gly Ile Leu Ile Asp Gly Lys Lys Leu Val Val Ala  
130 135 140  
Asn Val Gly Asp Ser Arg Ala Val Met Ser Lys Asn Gly Val Ala His  
145 150 155 160  
Gln Leu Ser Val Asp His Glu Pro Ser Lys Glu Lys Lys Glu Ile Glu  
165 170 175  
Ser Arg Gly Gly Phe Val Ser Asn Ile Pro Gly Asp Val Pro Arg Val  
180 185 190  
Asp Gly Gln Leu Ala Val Ala Arg Ala Phe Gly Asp Lys Ser Leu Lys  
195 200 205  
Leu His Leu Ser Ser Glu Pro Asp Ile Thr His Gln Thr Ile Asp Asp  
210 215 220  
His Thr Glu Phe Ile Leu Phe Ala Ser Asp Gly Ile Trp Lys Val Leu  
225 230 235 240  
Ser Asn Gln Glu Ala Val Asp Ala Ile Lys Ser Ile Lys Asp Pro His  
245 250 255

Ala Ala Ala Lys His Leu Ile Glu Glu Ala Ile Ser Arg Lys Ser Lys  
 260 265 270

Asp Asp Ile Ser Cys Ile Val Val Lys Phe His  
 275 280

<210> 2537

<211> 492

<212> DNA

<213> Arabidopsis thaliana

<400> 2537

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 ccaatccact ccgattcacc agatttttgc cgtaaaatct cttcatcagt cagatccggt 180  
 aaaaaatcgt cgaatcgctc ctccgccgct tcctccgccg cagcagcgtc gtcgcttcct 240  
 gttaacgtgc cggactgggc caagattctc cgcggaagaat accgcgataa ccgacggaga 300  
 agcatcgagg ataacgacga cgatgacgat gataacgaag acggtggcga ttggtaccg 360  
 ccgcatgagt ttctggcgaa gacgagaatg gcttcgttct cggttcatga aggagtaggg 420  
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<210> 2538

<211> 163

<212> PRT

<213> Arabidopsis thaliana

<400> 2538

Met Ala Thr Gly Lys Ser Tyr Tyr Ala Arg Pro Ser Tyr Arg Phe Leu  
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Gly Thr Asp Gln Pro Ser Tyr Phe Thr Ala Ser Asp Ser Gly Leu Glu  
 20 25 30

Phe Asp Glu Ser Asp Leu Phe Asn Pro Ile His Ser Asp Ser Pro Asp  
 35 40 45

Phe Cys Arg Lys Ile Ser Ser Ser Val Arg Ser Gly Lys Lys Ser Ser  
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50

55

60

Asn Arg Pro Ser Ala Ala Ser Ser Ala Ala Ala Ala Ser Ser Leu Pro  
65 70 75 80

Val Asn Val Pro Asp Trp Ser Lys Ile Leu Arg Gly Glu Tyr Arg Asp  
85 90 95

Asn Arg Arg Arg Ser Ile Glu Asp Asn Asp Asp Asp Asp Asp Asn  
100 105 110

Glu Asp Gly Gly Asp Trp Leu Pro Pro His Glu Phe Leu Ala Lys Thr  
115 120 125

Arg Met Ala Ser Phe Ser Val His Glu Gly Val Gly Arg Thr Leu Lys  
130 135 140

Gly Arg Asp Leu Ser Arg Val Arg Asn Ala Ile Phe Glu Lys Phe Gly  
145 150 155 160

Phe Gln Asp

<210> 2539

<211> 1029

<212> DNA

<213> Arabidopsis thaliana

<400> 2539

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tacaatgtac gcggaggaa gctaaatcgt ggtctctctg tgggtgatag ctacaagctg	180
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tgcatggaat ggcttcaagc ttatttcctt gtgcttgatg acatcatgga caactctgtc	300
acacgcctg gccagcctt ttggtttaga aagccaaagg ttggtatgat tgccattaac	360
gatgggattc tacttcgcaa tcatatccac aggatttca aaaagcactt cagggaaatg	420
ccttactatg ttgacctcgt tgatttgttt aacgaggtag agtttcaaac agcttgcggc	480
cagatgattg atttgatcac cacccttgat ggagaaaaag atttgtctaa gtactccttg	540
caaatccatc ggcgtattgt tgagtacaaa acagcttatt actcatttta tcttctgtgt	600
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ggagcggtta tggaatatga gaaggaaagc tatgagaagc tgacaaagtt gatcgaagct 960
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cagaagtag 1029

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&lt;210&gt; 2540

&lt;211&gt; 342

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2540

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Ser Asp Leu Leu Gln Asp Pro Ser Phe Glu Phe Thr His Glu Ser Arg
20 25 30

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Gln Trp Leu Glu Arg Met Leu Asp Tyr Asn Val Arg Gly Gly Lys Leu
35 40 45

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Asn Arg Gly Leu Ser Val Val Asp Ser Tyr Lys Leu Leu Lys Gln Gly
50 55 60

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Gln Asp Leu Thr Glu Lys Glu Thr Phe Leu Ser Cys Ala Leu Gly Trp
65 70 75 80

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Cys Ile Glu Trp Leu Gln Ala Tyr Phe Leu Val Leu Asp Asp Ile Met
85 90 95

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Asp Asn Ser Val Thr Arg Arg Gly Gln Pro Cys Trp Phe Arg Lys Pro
100 105 110

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Lys Val Gly Met Ile Ala Ile Asn Asp Gly Ile Leu Leu Arg Asn His
115 120 125

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Ile His Arg Ile Leu Lys Lys His Phe Arg Glu Met Pro Tyr Tyr Val
130 135 140

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Asp Leu Val Asp Leu Phe Asn Glu Val Glu Phe Gln Thr Ala Cys Gly  
145 150 155 160

Gln Met Ile Asp Leu Ile Thr Thr Phe Asp Gly Glu Lys Asp Leu Ser  
165 170 175

Lys Tyr Ser Leu Gln Ile His Arg Arg Ile Val Glu Tyr Lys Thr Ala  
180 185 190

Tyr Tyr Ser Phe Tyr Leu Pro Val Ala Cys Ala Leu Leu Met Ala Gly  
195 200 205

Glu Asn Leu Glu Asn His Thr Asp Val Lys Thr Val Leu Val Asp Met  
210 215 220

Gly Ile Tyr Phe Gln Val Gln Asp Asp Tyr Leu Asp Cys Phe Ala Asp  
225 230 235 240

Pro Glu Thr Leu Gly Lys Ile Gly Thr Asp Ile Glu Asp Phe Lys Cys  
245 250 255

Ser Trp Leu Val Val Lys Ala Leu Glu Arg Cys Ser Glu Glu Gln Thr  
260 265 270

Lys Ile Leu Tyr Glu Asn Tyr Gly Lys Ala Glu Pro Ser Asn Val Ala  
275 280 285

Lys Val Lys Ala Leu Tyr Lys Glu Leu Asp Leu Glu Gly Ala Phe Met  
290 295 300

Glu Tyr Glu Lys Glu Ser Tyr Glu Lys Leu Thr Lys Leu Ile Glu Ala  
305 310 315 320

His Gln Ser Lys Ala Ile Gln Ala Val Leu Lys Ser Phe Leu Ala Lys  
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Ile Tyr Lys Arg Gln Lys  
340

<210> 2541

<211> 639

<212> DNA

<213> Arabidopsis thaliana

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<210> 2542

<211> 212

<212> PRT

<213> Arabidopsis thaliana

<400> 2542

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 Ala His Pro Trp His Asp Leu Glu Ile Gly Pro Gly Ala Pro Gln Ile  
 35 40 45  
 Phe Asn Val Val Val Glu Ile Thr Lys Gly Ser Lys Val Lys Tyr Glu  
 50 55 60  
 Leu Asp Lys Lys Thr Gly Leu Ile Lys Val Asp Arg Ile Leu Tyr Ser  
 65 70 75 80  
 Ser Val Val Tyr Pro His Asn Tyr Gly Phe Val Pro Arg Thr Leu Cys  
 85 90 95  
 Glu Asp Asn Asp Pro Ile Asp Val Leu Val Ile Met Gln Glu Pro Val  
 100 105 110

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Leu Pro Gly Cys Phe Leu Arg Ala Arg Ala Ile Gly Leu Met Pro Met  
115 120 125

Ile Asp Gln Gly Glu Lys Asp Asp Lys Ile Ile Ala Val Cys Val Asp  
130 135 140

Asp Pro Glu Tyr Lys His Tyr Thr Asp Ile Lys Glu Leu Pro Pro His  
145 150 155 160

Arg Leu Ser Glu Ile Arg Arg Phe Phe Glu Asp Tyr Lys Lys Asn Glu  
165 170 175

Asn Lys Glu Val Ala Val Asn Asp Phe Leu Pro Ser Glu Ser Ala Val  
180 185 190

Glu Ala Ile Gln Tyr Ser Met Asp Leu Tyr Ala Glu Tyr Ile Leu His  
195 200 205

Thr Leu Arg Arg  
210

<210> 2543

<211> 1308

<212> DNA

<213> Arabidopsis thaliana

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<211> 435

<212> PRT

<213> Arabidopsis thaliana

<400> 2544

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20 25 30	

Phe Lys Ile Val Pro Val Ser Ser Pro Ile Ser Cys Ser Ala Pro Ala	
35 40 45	

Leu Cys Ser Ala Tyr Glu Leu Tyr Leu Arg Leu Pro Glu Leu Arg Lys	
50 55 60	

Leu Trp Ser Ser Arg Asp Phe Pro Gln Trp Thr Ser Glu Pro Ile Leu	
65 70 75 80	

Lys Pro Ala Leu Gln Ala Leu Glu Ile Ser Phe Arg Leu Val Phe Ala	
85 90 95	

Val Cys Ser Asp Thr Arg Pro Tyr Ile Asn His Arg Glu Trp Asn Arg	
100 105 110	

Arg Leu Asp Ser Leu Ile Thr Lys Gln Ile Gln Leu Val Ala Ala Ile	
Page 3571	

115

120

125

Cys Glu Asp Glu Glu Glu Gly Ile Ser Ala Glu Ala Pro Val Gly  
 130 135 140  
 Gly Gly Arg Ser Ser Leu Ser Leu Leu Pro Gln Leu Ala Thr Trp Arg  
 145 150 155 160  
 Arg Ser Glu Ala Leu Gly Lys Lys Ile Leu Tyr Thr Ile Asp Asn Glu  
 165 170 175  
 Met Ser Arg Cys Lys Tyr Thr Leu Gly Leu Gly Glu Gln Asn Ile Ala  
 180 185 190  
 Gly Lys Pro Asn Leu Arg Tyr Asp Ala Ile Cys Arg Pro Asn Glu Ile  
 195 200 205  
 Tyr Ser Leu Lys Asp Asn Pro Tyr Ala Asp His Ile Asp Asn His Glu  
 210 215 220  
 Asn Gln Thr Leu Tyr Ile Ile His Gln Ile Leu Glu Ser Trp Ile Tyr  
 225 230 235 240  
 Ala Ser Gly Asn Leu Leu Asn Arg Ile Val Ser Ser Ile Glu Glu Glu  
 245 250 255  
 Lys Phe Gly Lys Ala Ser Asn Asp Val Tyr Leu Leu Glu Lys Ile Trp  
 260 265 270  
 Lys Ile Leu Ala Glu Ile Glu Asp Leu His Met Leu Met Asp Pro Glu  
 275 280 285  
 Asp Phe Leu Lys Leu Lys Lys Gln Leu Gln Ile Lys Ser Thr Gly Lys  
 290 295 300  
 Asn Asp Ala Phe Cys Phe Arg Ser Lys Gly Leu Val Glu Met Met Lys  
 305 310 315 320  
 Met Ser Lys Asp Leu Arg Gln Lys Val Pro Ala Val Leu Ala Val Glu  
 325 330 335  
 Val Asp Pro Thr Gly Gly Pro Arg Leu Gln Glu Ala Ala Met Lys Leu  
 340 345 350  
 Tyr Ala Arg Lys Thr Glu Cys Asp Lys Ile His Leu Leu Gln Gly Met  
 355 360 365

Gln Ala Val Glu Ala Ala Ala Lys Ser Phe Phe Phe Gly Tyr Arg Gln  
 370 375 380

Leu Val Ala Ala Met Met Gly Ser Ala Glu Met Asn Ala Thr Ala Ser  
 385 390 395 400

Gln Glu Ser Cys Asp Ser Leu Ser Gln Ile Phe Met Glu Pro Thr Tyr  
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His Leu Gly  
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<210> 2545

<211> 531

<212> DNA

<213> Arabidopsis thaliana

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 gaagcggcgg cgagagctta cgacactgct gttttttacc tccgtggtcc ttcagcgagg 240  
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 gagaattgtc gtaagagcgg taacgggtca ttggaacggg tcgatttgaa taaattaccc 480  
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<211> 176

<212> PRT

<213> Arabidopsis thaliana

<400> 2546

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<212> DNA
<213> Arabidopsis thaliana
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Page 3574

## 047-E2F-PCT.ST25.txt

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&lt;210&gt; 2548

&lt;211&gt; 271

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2548

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Ala Ala Lys Lys Ala Gly Gln Ile Ile Arg Lys Gly Phe Tyr Glu Thr
20          25          30

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```

Lys His Val Glu His Lys Gly Gln Val Asp Leu Val Thr Glu Thr Asp
35          40          45

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Lys Gly Cys Glu Glu Leu Val Phe Asn His Leu Lys Gln Leu Phe Pro
50          55          60

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Asn His Lys Phe Ile Gly Glu Glu Thr Thr Ala Ala Phe Gly Val Thr
65          70          75          80

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Glu Leu Thr Asp Glu Pro Thr Trp Ile Val Asp Pro Leu Asp Gly Thr
85          90          95

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Thr Asn Phe Val His Gly Phe Pro Phe Val Cys Val Ser Ile Gly Leu
100          105          110

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Thr Ile Gly Lys Val Pro Val Val Gly Val Val Tyr Asn Pro Ile Met
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047-E2F-PCT.ST25.txt

Glu Glu Leu Phe Thr Gly Val Gln Gly Lys Gly Ala Phe Leu Asn Gly  
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Val Thr Glu Ala Gly Thr Lys Arg Asp Lys Ala Thr Leu Asp Asp Thr  
165 170 175

Thr Asn Arg Ile Asn Ser Leu Leu Thr Lys Val Arg Ser Leu Arg Met  
180 185 190

Ser Gly Ser Cys Ala Leu Asp Leu Cys Gly Val Ala Cys Gly Arg Val  
195 200 205

Asp Ile Phe Tyr Glu Leu Gly Phe Gly Gly Pro Trp Asp Ile Ala Ala  
210 215 220

Gly Ile Val Ile Val Lys Glu Ala Gly Gly Leu Ile Phe Asp Pro Ser  
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## 047-E2F-PCT.ST25.txt

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<213> Arabidopsis thaliana

<400> 2550

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Gly	Arg	Lys	Asn	Lys	Ile	Lys	Leu	Gly	Ser	Glu	Thr	Leu	Met	Phe	Thr
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Arg	Lys	Arg	Phe	Met	Gly	Asp	Leu	Val	Thr	Ser	Ala	Leu	Gln	Ser	Tyr
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Gln	Phe	Ser	Lys	Ile	Cys	Ala	Ser	Lys	Thr	Ser	Ile	Glu	Leu	Arg	Glu
65					70					75				80	

Ala	Leu	Ser	Ser	Arg	Arg	Ala	Glu	Ala	Asp	Asp	Leu	Lys	Lys	Val	Thr
				85					90					95	

Ser	Tyr	Ser	Phe	Arg	Thr	Lys	Ala	Gly	Ala	Leu	Val	Lys	Val	Lys	Val
			100					105					110		

Glu	Lys	Lys	Arg	Glu	Lys	Tyr	Ser	Ile	Leu	Val	Tyr	Val	Ser	Ser	Leu
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Glu	Leu	Ser	Gly	Asp	Asp	Lys	Ser	Arg	Leu	Val	Met	Val	Trp	Gly	Val
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Tyr	Arg	Ser	Asp	Ser	Ser	Cys	Phe	Leu	Pro	Leu	Asp	Phe	Glu	Asn	Ser
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047-E2F-PCT.ST25.txt

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165 175

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180 185 190

Pro Phe Tyr Leu Ser Phe His Leu Lys Leu Val Ser Gly Arg Asp Pro  
195 200 205

Asp Gly Gln Glu Met Leu Thr His Arg Asp Thr Asp Phe Cys Ile Pro  
210 215 220

Val Gly Phe Thr Ala Gly His Pro Leu Pro Leu Gly Leu Ser Ser Gly  
225 230 235 240

Pro Asp Asp Asp Ser Trp Asn Phe Ser Phe Phe Ser Arg Ser Ser Thr  
245 250 255

Asn Val Val Leu Cys Leu Tyr Asp Asp Ser Thr Thr Asp Lys Pro Ala  
260 265 270

Leu Glu Leu Asp Leu Asp Pro Tyr Val Asn Arg Thr Gly Asp Val Trp  
275 280 285

His Ala Ser Val Asp Asn Thr Trp Asp Phe Val Arg Tyr Gly Tyr Arg  
290 295 300

Cys Lys Glu Thr Ala His Ser Lys Glu Asp Val Asp Val Glu Gly Glu  
305 310 315 320

Pro Ile Val Leu Asp Pro Tyr Ala Thr Val Val Gly Lys Ser Val Ser  
325 330 335

Gln Lys Tyr Leu Gly Ser Leu Ser Lys Ser Pro Ser Phe Asp Trp Gly  
340 345 350

Glu Asp Val Ser Pro Asn Ile Pro Leu Glu Lys Leu Leu Val Tyr Arg  
355 360 365

Leu Asn Val Lys Gly Phe Thr Gln His Arg Ser Ser Lys Leu Pro Ser  
370 375 380

Asn Val Ala Gly Thr Phe Ser Gly Val Ala Glu Lys Val Ser His Leu  
385 390 395 400

Lys Thr Leu Gly Thr Asn Ala Val Leu Leu Glu Pro Ile Phe Ser Phe  
Page 3579

Ser Glu Gln Lys Gly Pro Tyr Phe Pro Phe His Phe Phe Ser Pro Met  
420 425 430

Asp Ile Tyr Gly Pro Ser Asn Ser Leu Glu Ser Ala Val Asn Ser Met  
435 440 445

Lys Val Met Val Lys Lys Leu His Ser Glu Gly Ile Glu Val Leu Leu  
450 455 460

Glu Val Val Phe Thr His Thr Ala Asp Ser Gly Ala Leu Arg Gly Ile  
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Asp Asp Ser Ser Tyr Tyr Tyr Lys Gly Arg Ala Asn Asp Leu Asp Ser  
485 490 495

Lys Ser Tyr Leu Asn Cys Asn Tyr Pro Val Val Gln Gln Leu Val Leu  
500 505 510

Glu Ser Leu Arg Tyr Trp Val Thr Glu Phe His Val Asp Gly Phe Cys  
515 520 525

Phe Ile Asn Ala Ser Ser Leu Leu Arg Gly Val His Gly Glu Gln Leu  
530 535 540

Ser Arg Pro Pro Leu Val Glu Ala Ile Ala Phe Asp Pro Leu Leu Ala  
545 550 555 560

Glu Thr Lys Leu Ile Ala Asp Cys Trp Asp Pro Leu Glu Met Met Pro  
565 570 575

Lys Glu Val Arg Phe Pro His Trp Lys Arg Trp Ala Glu Leu Asn Thr  
580 585 590

Arg Tyr Cys Arg Asn Val Arg Asn Phe Leu Arg Gly Arg Gly Val Leu  
595 600 605

Ser Asp Leu Ala Thr Arg Ile Cys Gly Ser Gly Asp Val Phe Thr Asp  
610 615 620

Gly Arg Gly Pro Ala Phe Ser Phe Asn Tyr Ile Ser Arg Asn Ser Gly  
625 630 635 640

Leu Ser Leu Val Asp Ile Val Ser Phe Ser Gly Pro Glu Leu Ala Ser  
645 650 655

Glu Leu Ser Trp Asn Cys Gly Glu Glu Gly Ala Thr Asn Lys Ser Ala  
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Val Leu Gln Arg Arg Leu Lys Gln Ile Arg Asn Phe Leu Phe Ile Gln  
675 680 685

Tyr Ile Ser Leu Gly Val Pro Val Leu Asn Met Gly Asp Glu Cys Gly  
690 695 700

Ile Ser Thr Arg Gly Ser Pro Leu Leu Glu Ser Arg Lys Pro Phe Asp  
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Trp Asn Leu Leu Ala Ser Ala Phe Gly Thr Gln Ile Thr Gln Phe Ile  
725 730 735

Ser Phe Met Thr Ser Val Arg Ala Arg Arg Ser Asp Val Phe Gln Arg  
740 745 750

Arg Asp Phe Leu Lys Pro Glu Asn Ile Val Trp Tyr Ala Asn Asp Gln  
755 760 765

Thr Thr Pro Lys Trp Glu Asp Pro Ala Ser Lys Phe Leu Ala Leu Glu  
770 775 780

Ile Lys Ser Glu Ser Glu Glu Glu Thr Ala Ser Leu Ala Glu Pro  
785 790 795 800

Asn Glu Pro Lys Ser Asn Asp Leu Phe Ile Gly Phe Asn Ala Ser Asp  
805 810 815

His Pro Glu Ser Val Val Leu Pro Ser Leu Pro Asp Gly Ser Lys Trp  
820 825 830

Arg Arg Leu Val Asp Thr Ala Leu Pro Phe Pro Gly Phe Phe Ser Val  
835 840 845

Glu Gly Glu Thr Val Val Ala Glu Glu Pro Leu Gln Gln Leu Val Val  
850 855 860

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<211> 1605

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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&lt;211&gt; 534

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

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 20 25 30

Phe Thr Asp Ala Tyr Asp Leu Phe Cys Ile Ser Leu Val Thr Lys Leu  
 35 40 45

Leu Gly Arg Ile Tyr Tyr His Val Glu Gly Ala Gln Lys Pro Gly Thr  
 50 55 60

Leu Pro Pro Asn Val Ala Ala Ala Val Asn Gly Val Ala Phe Cys Gly  
 65 70 75 80

Thr Leu Ala Gly Gln Leu Phe Phe Gly Trp Leu Gly Asp Lys Leu Gly  
 85 90 95

Arg Lys Lys Val Tyr Gly Met Thr Leu Met Val Met Val Leu Cys Ser  
 100 105 110

Ile Ala Ser Gly Leu Ser Phe Gly His Glu Pro Lys Ala Val Met Ala  
 115 120 125

Thr Leu Cys Phe Phe Arg Phe Trp Leu Gly Phe Gly Ile Gly Gly Asp  
 130 135 140

Tyr Pro Leu Ser Ala Thr Ile Met Ser Glu Tyr Ala Asn Lys Lys Thr  
 145 150 155 160

Arg Gly Ala Phe Val Ser Ala Val Phe Ala Met Gln Gly Phe Gly Ile  
 165 170 175

Met Ala Gly Gly Ile Phe Ala Ile Ile Ile Ser Ser Ala Phe Glu Ala  
 180 185 190

Lys Phe Pro Ser Pro Ala Tyr Ala Asp Asp Ala Leu Gly Ser Thr Ile  
 195 200 205

047-E2F-PCT.ST25.txt

Pro Gln Ala Asp Leu Val Trp Arg Ile Ile Leu Met Ala Gly Ala Ile  
210 215 220

Pro Ala Ala Met Thr Tyr Tyr Ser Arg Ser Lys Met Pro Glu Thr Ala  
225 230 235 240

Arg Tyr Thr Ala Leu Val Ala Lys Asp Ala Lys Gln Ala Ala Ser Asp  
245 250 255

Met Ser Lys Val Leu Gln Val Glu Ile Glu Pro Glu Gln Gln Lys Leu  
260 265 270

Glu Glu Ile Ser Lys Glu Lys Ser Lys Ala Phe Gly Leu Phe Ser Lys  
275 280 285

Glu Phe Met Ser Arg His Gly Leu His Leu Leu Gly Thr Thr Ser Thr  
290 295 300

Trp Phe Leu Leu Asp Ile Ala Phe Tyr Ser Gln Asn Leu Phe Gln Lys  
305 310 315 320

Asp Ile Phe Ser Ala Ile Gly Trp Ile Pro Pro Ala Gln Ser Met Asn  
325 330 335

Ala Ile Gln Glu Val Phe Lys Ile Ala Arg Ala Gln Thr Leu Ile Ala  
340 345 350

Leu Cys Ser Thr Val Pro Gly Tyr Trp Phe Thr Val Ala Phe Ile Asp  
355 360 365

Val Ile Gly Arg Phe Ala Ile Gln Met Met Gly Phe Phe Phe Met Thr  
370 375 380

Val Phe Met Phe Ala Leu Ala Ile Pro Tyr Asn His Trp Thr His Lys  
385 390 395 400

Glu Asn Arg Ile Gly Phe Val Ile Met Tyr Ser Leu Thr Phe Phe Phe  
405 410 415

Ala Asn Phe Gly Pro Asn Ala Thr Thr Phe Val Val Pro Ala Glu Ile  
420 425 430

Phe Pro Ala Arg Phe Arg Ser Thr Cys His Gly Ile Ser Ala Ala Ser  
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Gly Lys Leu Gly Ala Met Val Gly Ala Phe Gly Phe Leu Tyr Leu Ala  
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047-E2F-PCT.ST25.txt

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Gly Val Arg Asn Ser Leu Ile Val Leu Gly Val Val Asn Phe Leu Gly  
485 490 495

Ile Leu Phe Thr Phe Leu Val Pro Glu Ser Lys Gly Lys Ser Leu Glu  
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Arg Thr Val Pro Ile Val  
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<211> 555

<212> DNA

<213> Arabidopsis thaliana

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<211> 184

<212> PRT

<213> Arabidopsis thaliana

&lt;400&gt; 2554

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35 40 45Asp Gly Asp Asn Thr Asp Asn Ala Thr Ser Ala Ala Ile Val Asn Pro  
50 55 60Leu Gly Leu Gly Asp Phe Ser Phe Gly Lys Phe Val Ile Met Asp Asn  
65 70 75 80Pro Val Thr Met Asp Gln Asn Met Leu Ser Glu Gln Val Ala Arg Val  
85 90 95Gln Gly Phe Phe Phe Tyr His Gly Lys Thr Lys Tyr Asp Thr Trp Leu  
100 105 110Ser Trp Ser Val Val Phe Asn Ser Thr Gln His Lys Gly Ala Leu Asn  
115 120 125Ile Met Gly Glu Asn Ala Phe Met Glu Pro Thr Arg Asp Leu Pro Val  
130 135 140Val Gly Gly Thr Gly Asp Phe Val Met Thr Arg Gly Ile Ala Thr Phe  
145 150 155 160Met Thr Asp Leu Val Glu Gly Ser Lys Tyr Phe Arg Val Lys Met Asp  
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&lt;210&gt; 2555

&lt;211&gt; 990

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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 Page 3586



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<210> 2556

<211> 329

<212> PRT

<213> Arabidopsis thaliana

<400> 2556

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20 25 30

Leu Pro Pro Thr Glu Gln Ser Lys Asp Ile Pro Leu Asn Gln Thr Asn  
35 40 45

Asn Thr Phe Ile Arg Ile Phe Lys Pro Arg Asn Ile Pro Pro Glu Ser  
50 55 60

Lys Leu Pro Ile Leu Val Tyr Phe His Gly Gly Gly Phe Ile Leu Tyr  
Page 3587

65	70							75							80						
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His	Arg	Leu <sub>115</sub>	Pro	Ala	Ala	Tyr	Glu <sub>120</sub>	Asp	Ala	Val	Glu	Ala <sub>125</sub>	Ile	Leu	Trp						
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Phe	Phe <sub>195</sub>	Gly	Gly	Val	Glu	Pro	Ser <sub>200</sub>	Asp	Ser	Glu	Ser	Arg <sub>205</sub>	Leu	Lys	Asp						
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<211> 942

<212> DNA

<213> *Arabidopsis thaliana*

<400> 2557

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<211> 313

<212> PRT

<213> *Arabidopsis thaliana*

<400> 2558

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 85 90 95  
 Leu Ile Asp Arg Ile Lys Ala Gln Leu Glu Ala Ala Cys Pro Ser Thr  
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 Arg Val Ser Asn Asn Leu Asp Val Thr Leu Pro Gly Pro Thr Ile Ser  
 145 150 155 160  
 Val Ser Gly Ala Val Ser Leu Phe Thr Asn Lys Gly Met Asn Thr Phe  
 165 170 175  
 Asp Ala Val Ala Leu Leu Gly Ala His Thr Val Gly Gln Gly Asn Cys  
 180 185 190  
 Gly Leu Phe Ser Asp Arg Ile Thr Ser Phe Gln Gly Thr Gly Arg Pro  
 195 200 205  
 Asp Pro Ser Met Asp Pro Ala Leu Val Thr Ser Leu Arg Asn Thr Cys  
 210 215 220  
 Arg Asn Ser Ala Thr Ala Ala Leu Asp Gln Ser Ser Pro Leu Arg Phe  
 225 230 235 240  
 Asp Asn Gln Phe Phe Lys Gln Ile Arg Lys Arg Arg Gly Val Leu Gln  
 245 250 255  
 Val Asp Gln Arg Leu Ala Ser Asp Pro Gln Thr Arg Gly Ile Val Ala  
 260 265 270

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Arg Tyr Ala Asn Asn Asn Ala Phe Phe Lys Arg Gln Phe Val Arg Ala  
275 285

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<210> 2559

<211> 522

<212> DNA

<213> Arabidopsis thaliana

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<210> 2560

<211> 173

<212> PRT

<213> Arabidopsis thaliana

<400> 2560

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20 25 30

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Ser Ser Ser Ser Ala Ser Tyr Asn Gln Ile Leu Cys Leu Leu Asn Asp  
35 40 45

Ser Asp Glu Gln Asn Gln His Asn Asn Asp Leu Thr Ser Phe Ile Asn  
50 55 60

Ala Leu Gln Gln Glu Ile Ser Ser Asp Asp Gln Tyr Ala Val Val Ser  
65 70 75 80

Glu Thr Ser Asn Val Glu Asp Ser Phe Ser Cys Val Ser Ser Lys  
85 90 95

Glu Glu Glu Val Glu Asp Asp Ser Lys Glu Lys Val Met Gln His Leu  
100 105 110

Leu Glu Ala Ser Asp Asp Glu Leu Gly Ile Pro Asn Thr Asp Phe Gly  
115 120 125

Glu Ser Asn Tyr Glu Lys Ala Asn Asp Gly Tyr Val Tyr Gly Asp Ser  
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Leu Leu Asp Gly Phe Gly Asp Ala Phe Trp Glu Leu Glu Asp Glu Ala  
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<211> 939

<212> DNA

<213> Arabidopsis thaliana

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aagagctttc ttgttcaaa tgatcacaaa ctacgcgttg gagtaacgt attggtctgt 360  
tcgggagctg gagctgcaac taccattgcc acaaatcctc ttgggtcgt caagactaga 420  
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<210> 2562

<211> 312

<212> PRT

<213> Arabidopsis thaliana

<400> 2562

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Pro Leu Asp Val Ile Lys Thr Arg Phe Gln Val His Gly Leu Pro Lys  
 35 40 45

Leu Gly Asp Ala Asn Ile Lys Gly Ser Leu Ile Val Gly Ser Leu Glu  
 50 55 60

Gln Ile Phe Lys Arg Glu Gly Met Arg Gly Leu Tyr Arg Gly Leu Ser  
 65 70 75 80

Pro Thr Val Met Ala Leu Leu Ser Asn Trp Ala Ile Tyr Phe Thr Met  
 85 90 95

Tyr Asp Gln Leu Lys Ser Phe Leu Cys Ser Asn Asp His Lys Leu Ser  
 100 105 110

Val Gly Ala Asn Val Leu Ala Ala Ser Gly Ala Gly Ala Ala Thr Thr  
 115 120 125

Ile Ala Thr Asn Pro Leu Trp Val Val Lys Thr Arg Leu Gln Thr Gln  
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130

135

140

Gly Met Arg Val Gly Ile Val Pro Tyr Lys Ser Thr Phe Ser Ala Leu  
145 150 155 160

Arg Arg Ile Ala Tyr Glu Glu Gly Ile Arg Gly Leu Tyr Ser Gly Leu  
165 170 175

Val Pro Ala Leu Ala Gly Ile Ser His Val Ala Ile Gln Phe Pro Thr  
180 185 190

Tyr Glu Met Ile Lys Val Tyr Leu Ala Lys Lys Gly Asp Lys Ser Val  
195 200 205

Asp Asn Leu Asn Ala Arg Asp Val Ala Val Ala Ser Ser Ile Ala Lys  
210 215 220

Ile Phe Ala Ser Thr Leu Thr Tyr Pro His Glu Val Val Arg Ala Arg  
225 230 235 240

Leu Gln Glu Gln Gly His His Ser Glu Lys Arg Tyr Ser Gly Val Arg  
245 250 255

Asp Cys Ile Lys Lys Val Phe Glu Lys Asp Gly Phe Pro Gly Phe Tyr  
260 265 270

Arg Gly Cys Ala Thr Asn Leu Leu Arg Thr Thr Pro Ala Ala Val Ile  
275 280 285

Thr Phe Thr Ser Phe Glu Met Val His Arg Phe Leu Val Thr His Ile  
290 295 300

Pro Ser Glu Gln Ser Ser Ile Leu  
305 310

&lt;210&gt; 2563

&lt;211&gt; 420

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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<210> 2564

<211> 139

<212> PRT

<213> Arabidopsis thaliana

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 20 25 30

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 35 40 45

Pro Gly Gln Thr His Glu Asp Leu Ala Ala Ser Leu Pro Ala Asp Glu  
 50 55 60

Cys Arg Tyr Ala Ile Phe Asp Phe Asp Phe Val Ser Ser Glu Gly Val  
 65 70 75 80

Pro Arg Ser Arg Ile Phe Phe Val Ala Trp Ser Pro Asp Thr Ala Arg  
 85 90 95

Val Arg Ser Lys Met Ile Tyr Ala Ser Ser Lys Asp Arg Phe Lys Arg  
 100 105 110

Glu Leu Asp Gly Ile Gln Val Glu Leu Gln Ala Thr Asp Pro Thr Glu  
 115 120 125

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 130 135

<210> 2565

<211> 2286

<212> DNA

<213> *Arabidopsis thaliana*

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<211> 761

<212> PRT

<213> Arabidopsis thaliana

<400> 2566

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35 40 45

Gln Ser Leu Leu Leu Pro Tyr Ser Pro Leu Arg Cys Arg Thr Cys Arg  
50 55 60

Ser Val Leu Asn Pro Tyr Ser Val Val Asp Phe Ser Ala Cys Asn Trp  
65 70 75 80

Gly Cys Pro Phe Cys Phe Asn Arg Asn Pro Phe Pro Leu Asn Tyr Ser  
85 90 95

Ser Val Ala Asp Asn Asn Leu Pro Pro Glu Leu Phe Pro His Ser Thr  
100 105 110

Thr Val Glu Tyr Leu Cys Asp Ser Phe Ser Ser Pro Ser Pro Pro Val  
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115

120

125

Phe Leu Phe Val Val Asp Thr Cys Leu Ile Ser Glu Glu Leu Asp Phe  
 130 135 140  
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 Gly Phe Pro His Cys Thr Lys Ser Tyr Phe Phe His Gly Asn Lys Asp  
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 Cys Thr Lys Asp Gln Leu Leu Asp Gln Leu Ser Phe Phe Val Lys Asn  
 195 200 205  
 Pro Lys Pro Ser Ser Gly Val Ile Ala Gly Ala Arg Asp Gly Leu Ser  
 210 215 220  
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 245 250 255  
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 260 265 270  
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 275 280 285  
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 305 310 315 320  
 Asp Ser Ala Met Tyr Tyr His Lys Ala Val Glu Phe Tyr Glu Met Leu  
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 Ala Lys Gln Leu Val His Gln Gly His Val Leu Asp Val Phe Ala Ser  
 340 345 350  
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 355 360 365

Thr Gly Gly Phe Val Val Leu Ala Glu Ser Phe Gly His Ser Val Phe  
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 385 390 395 400  
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 420 425 430  
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 515 520 525  
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 565 570 575  
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660 665 670

Lys Ala Gly Tyr His Asn Gln Pro Glu His Gln Ala Phe Gly His Leu  
675 680 685

Leu Gln Ser Pro Arg Asp Tyr Ala Asp Thr Ile Met Ser Glu Arg Phe  
690 695 700

Pro Thr Pro Arg Leu Val Ile Cys Asp Gln Tyr Gly Ser Gln Ala Arg  
705 710 715 720

Phe Leu Leu Ala Lys Leu Asn Pro Cys Asp Gly Asp Ala His Phe Ser  
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<211> 429

<212> DNA

<213> Arabidopsis thaliana

<400> 2567

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atcggtgctg cgattgctga tgggcttgga tcttgtccga ttacgatggt gttagatgat	360
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&lt;210&gt; 2568

&lt;211&gt; 142

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2568

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35 40 45Phe Glu Ser Met Arg Leu Leu Glu Ser His Phe Gly Val Asp Val Val  
50 55 60Thr Pro Gln Asp Glu Leu Thr Asn Leu Tyr Asp Ser Ile Phe Glu Lys  
65 70 75 80Phe Asp Thr Asp Gln Ser Gly Ser Val Asp Leu Glu Glu Phe Arg Ser  
85 90 95Glu Met Lys Lys Ile Val Leu Ala Ile Ala Asp Gly Leu Gly Ser Cys  
100 105 110Pro Ile Thr Met Val Leu Asp Asp Asp Asp Asn Phe Leu Lys Lys  
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&lt;210&gt; 2569

&lt;211&gt; 885

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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&lt;210&gt; 2570

&lt;211&gt; 294

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2570

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Ser Ala Phe Ser Val Leu Leu Thr Leu His Phe Thr Ile Gln Leu Val
          20          25          30

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Ser Gln His Leu Phe His Trp Lys Asn Pro Lys Glu Gln Lys Ala Ile
          35          40          45

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Leu Ile Ile Val Leu Met Ala Pro Ile Tyr Ala Val Val Ser Phe Ile
          50          55          60

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Gly Leu Leu Glu Val Lys Gly Ser Glu Thr Phe Phe Leu Phe Leu Glu
65          70          75          80

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Ser Ile Lys Glu Cys Tyr Glu Ala Leu Val Ile Ala Lys Phe Leu Ala
          85          90          95

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047-E2F-PCT.ST25.txt

Leu Met Tyr Ser Tyr Leu Asn Ile Ser Met Ser Lys Asn Ile Leu Pro  
 100 105 110  
 Asp Gly Ile Lys Gly Arg Glu Ile His His Ser Phe Pro Met Thr Leu  
 115 120 125  
 Phe Gln Pro His Val Val Arg Leu Asp Arg His Thr Leu Lys Leu Leu  
 130 135 140  
 Lys Tyr Trp Thr Trp Gln Phe Val Val Ile Arg Pro Val Cys Ser Thr  
 145 150 155 160  
 Leu Met Ile Ala Leu Gln Leu Ile Gly Phe Tyr Pro Ser Trp Leu Ser  
 165 170 175  
 Trp Thr Phe Thr Ile Ile Val Asn Phe Ser Val Ser Leu Ala Leu Tyr  
 180 185 190  
 Ser Leu Val Ile Phe Tyr His Val Phe Ala Lys Glu Leu Ala Pro His  
 195 200 205  
 Asn Pro Leu Ala Lys Phe Leu Cys Ile Lys Gly Ile Val Phe Phe Val  
 210 215 220  
 Phe Trp Gln Gly Ile Ala Leu Asp Ile Leu Val Ala Met Gly Phe Ile  
 225 230 235 240  
 Lys Ser His His Phe Trp Leu Glu Val Glu Gln Ile Gln Glu Ala Ile  
 245 250 255  
 Gln Asn Val Leu Val Cys Leu Glu Met Val Ile Phe Ala Ala Val Gln  
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 Leu Asp Lys Lys Thr Glu  
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<212> DNA

<213> Arabidopsis thaliana

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<211> 100

<212> PRT

<213> Arabidopsis thaliana

<400> 2572

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 Thr Gly Lys Ser Phe Tyr Gly Ser Gly Gly Asp Tyr Ser Met Phe Ala  
 35 40 45  
 Gly Lys Asp Ala Ser Arg Ala Leu Gly Lys Met Ser Lys Asn Glu Glu  
 50 55 60  
 Asp Val Ser Pro Ser Leu Glu Gly Leu Thr Glu Lys Glu Ile Asn Thr  
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 Leu Asn Asp Trp Glu Thr Lys Phe Glu Ala Lys Tyr Pro Val Val Gly  
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 Arg Val Val Ser  
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<211> 372

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<213> Arabidopsis thaliana

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 aatgccgcta gaaacgtcgg ccctggctct aacgctgacc gtgctgctgg gattcctagg 300  
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<210> 2574

<211> 123

<212> PRT

<213> Arabidopsis thaliana

<400> 2574

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Ala Ala Gly Pro Ile Thr Ala Lys Ala Ala Leu Ser Cys Gly Glu Val  
 20 25 30

Asn Ser Asn Leu Lys Pro Cys Thr Gly Tyr Leu Thr Asn Gly Gly Ile  
 35 40 45

Thr Ser Pro Gly Pro Gln Cys Cys Asn Gly Val Arg Lys Leu Asn Gly  
 50 55 60

Met Val Leu Thr Thr Leu Asp Arg Arg Gln Ala Cys Arg Cys Ile Lys  
 65 70 75 80

Asn Ala Ala Arg Asn Val Gly Pro Gly Leu Asn Ala Asp Arg Ala Ala  
 85 90 95

Gly Ile Pro Arg Arg Cys Gly Ile Lys Ile Pro Tyr Ser Thr Gln Ile  
 100 105 110

Arg Phe Asn Thr Lys Cys Asn Thr Tyr Ile Cys  
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<210> 2575

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&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2575

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&lt;210&gt; 2576

&lt;211&gt; 287

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2576

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Met Ala Ser Ser Ala Phe Ala Phe Pro Ser Tyr Ile Ile Thr Lys Gly
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Ala Ser Thr Asp Ser Phe Lys Ser Thr Ser Leu Ser Ser Ser Arg Ser
20           25           30

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Leu Val Thr Asp Phe His Leu Leu Phe Ser Arg Pro Ile Ser Ser Gly
35           40           45

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047-E2F-PCT.ST25.txt

Pro Lys Tyr Gln Ser Ala Lys Ser Ala Lys Pro Glu Ser Pro Val Ala  
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Ile Asn Cys Leu Thr Asp Ala Lys Gln Val Cys Ala Val Gly Arg Arg  
65 70 75 80

Lys Ser Met Met Met Gly Leu Leu Met Ser Gly Leu Ile Val Ser Gln  
85 90 95

Ala Asn Leu Pro Thr Ala Phe Ala Ser Thr Pro Val Phe Arg Glu Tyr  
100 105 110

Ile Asp Thr Phe Asp Gly Tyr Ser Phe Lys Tyr Pro Gln Asn Trp Ile  
115 120 125

Gln Val Arg Gly Ala Gly Ala Asp Ile Phe Phe Arg Asp Pro Val Val  
130 135 140

Leu Asp Glu Asn Leu Ser Val Glu Phe Ser Ser Pro Ser Ser Ser Asn  
145 150 155 160

Tyr Thr Ser Leu Glu Asp Leu Gly Ser Pro Glu Glu Val Gly Lys Arg  
165 170 175

Val Leu Arg Gln Tyr Leu Thr Glu Phe Met Ser Thr Arg Leu Gly Val  
180 185 190

Lys Arg Gln Ala Asn Ile Leu Ser Thr Ser Ser Arg Val Ala Asp Asp  
195 200 205

Gly Lys Leu Tyr Tyr Gln Val Glu Val Asn Ile Lys Ser Tyr Ala Asn  
210 215 220

Asn Asn Glu Leu Ala Val Met Pro Gln Asp Arg Val Ala Arg Leu Glu  
225 230 235 240

Trp Asn Arg Arg Tyr Leu Ala Val Leu Gly Val Glu Asn Asp Arg Leu  
245 250 255

Tyr Ser Ile Arg Leu Gln Thr Pro Glu Lys Val Phe Leu Glu Glu Glu  
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<210> 2577

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&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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gttgagttac aaagacagct caagatcaag actgttgaga ttgatatgtt aaacatcact	360
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<212> PRT

<213> Arabidopsis thaliana

<400> 2578

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 20 25 30

Gly Gly Asp Lys Glu Gln Ser Val Asp Pro Asp Tyr Asn Leu Asn Asp  
 Page 3609

Lys 50	Asn	Lys	Glu	Arg	Lys	Tyr 55	Glu	Val	Glu	Met	Ala 60	Tyr	Asn	Asp	Gly
Glu 65	Leu	Glu	Arg	Leu	Lys 70	Gln	Leu	Val	Lys	Glu 75	Leu	Glu	Glu	Arg	Glu 80
Val	Lys	Leu	Glu	Gly 85	Glu	Leu	Leu	Glu	Tyr 90	Tyr	Gly	Leu	Lys	Glu 95	Gln
Glu	Ser	Asp	Ile 100	Val	Glu	Leu	Gln	Arg 105	Gln	Leu	Lys	Ile	Lys 110	Thr	Val
Glu	Ile	Asp 115	Met	Leu	Asn	Ile	Thr 120	Ile	Asn	Ser	Leu	Gln 125	Ala	Glu	Arg
Lys	Lys 130	Leu	Gln	Glu	Glu	Leu 135	Ser	Gln	Asn	Gly	Ile 140	Val	Arg	Lys	Glu
Leu 145	Glu	Val	Ala	Arg	Asn 150	Lys	Ile	Lys	Glu	Leu 155	Gln	Arg	Gln	Ile	Gln 160
Leu	Asp	Ala	Asn	Gln 165	Thr	Lys	Gly	Gln	Leu 170	Leu	Leu	Leu	Lys	Gln 175	His
Val	Ser	Ser	Leu 180	Gln	Met	Lys	Glu	Glu 185	Glu	Ala	Met	Asn	Lys 190	Asp	Thr
Glu	Val	Glu 195	Arg	Lys	Leu	Lys	Ala 200	Val	Gln	Asp	Leu	Glu 205	Val	Gln	Val
Met	Glu 210	Leu	Lys	Arg	Lys	Asn 215	Arg	Glu	Leu	Gln	His 220	Glu	Lys	Arg	Glu
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Asn	Met	Thr	Glu	Ser 245	Asp	Lys	Val	Ala	Lys 250	Val	Arg	Glu	Glu	Val 255	Asn
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Gln	Met	Asn 275	Arg	Phe	Ser	Glu	Val 280	Glu	Glu	Leu	Val	Tyr 285	Leu	Arg	Trp



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Val Asn Ala Cys Leu Arg Tyr Glu Leu Arg Asn Tyr Gln Thr Pro Ala  
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Gly Lys Ile Ser Ala Arg Asp Leu Ser Lys Asn Leu Ser Pro Lys Ser  
 305 310 315 320

Gln Ala Lys Ala Lys Arg Leu Met Leu Glu Tyr Ala Gly Ser Glu Arg  
 325 330 335

Gly Gln Gly Asp Thr Asp Leu Glu Ser Asn Tyr Ser Gln Pro Ser Ser  
 340 345 350

Pro Gly Ser Asp Asp Phe Asp Asn Ala Ser Met Asp Ser Ser Thr Ser  
 355 360 365

Arg Phe Ser Ser Phe Ser Lys Lys Pro Gly Leu Ile Gln Lys Leu Lys  
 370 375 380

Lys Trp Gly Lys Ser Lys Asp Asp Ser Ser Val Gln Ser Ser Pro Ser  
 385 390 395 400

Arg Ser Phe Tyr Gly Gly Ser Pro Gly Arg Leu Ser Ser Ser Met Asn  
 405 410 415

Lys Gln Arg Gly Pro Leu Glu Ser Leu Met Ile Arg Asn Ala Gly Glu  
 420 425 430

Ser Val Ala Ile Thr Thr Phe Gly Gln Val Asp Gln Glu Ser Pro Gly  
 435 440 445

Thr Pro Glu Thr Pro Asn Leu Pro Arg Ile Arg Thr Gln Gln Gln Ala  
 450 455 460

Ser Ser Pro Gly Glu Gly Leu Asn Ser Val Ala Ala Ser Phe His Val  
 465 470 475 480

Met Ser Lys Ser Val Asp Asn Val Leu Asp Glu Lys Tyr Pro Ala Tyr  
 485 490 495

Lys Asp Arg His Lys Leu Ala Val Glu Arg Glu Lys His Ile Lys His  
 500 505 510

Lys Ala Asp Gln Ala Arg Ala Glu Arg Phe Gly Gly Asn Val Ala Leu  
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Pro Pro Lys Leu Ala Gln Leu Lys Glu Lys Arg Val Val Val Pro Ser  
 530 535 540

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 565 570 575  
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 580 585 590  
 Ser Ala Gly Gly Gly Lys Ser Thr Asn Leu Pro Ser Ala Arg Pro Pro  
 595 600 605  
 Leu Pro Gly Gly Gly Pro Pro Pro Pro Pro Pro Gly Gly Gly  
 610 615 620  
 Pro Pro Pro Pro Gly Gly Gly Pro Pro Pro Pro Pro Pro Pro Pro  
 625 630 635 640  
 Gly Ala Leu Gly Arg Gly Ala Gly Gly Gly Asn Lys Val His Arg Ala  
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 675 680 685  
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 690 695 700  
 Leu Leu Ala Val Lys Ala Asp Val Glu Thr Gln Gly Asp Phe Val Gln  
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047-E2F-PCT.ST25.txt

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835 840 845  
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850 855 860  
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865 870 875 880  
Arg Glu Phe Leu Leu Leu Gln Gly Val Arg Phe Ala Phe Arg Val His  
885 890 895  
Gln Phe Ala Gly Gly Phe Asp Ala Glu Ser Met Lys Ala Phe Glu Glu  
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<211> 402

<212> DNA

<213> Arabidopsis thaliana

<400> 2579

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gtcgagaacg	ctaagaagtt	tgagcctaag	tacagactta	tcaggaatgg	acttgacacc	300
aagattgaga	aatcaaggaa	acagatcaag	gagaggaaga	acagggcgaa	gaagatccgt	360
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047-E2F-PCT.ST25.txt

<210> 2580

<211> 133

<212> PRT

<213> Arabidopsis thaliana

<400> 2580

Met Ala Glu Lys Ala Val Thr Ile Arg Thr Arg Asn Phe Met Thr Asn  
1 5 10 15

Arg Leu Leu Ala Arg Lys Gln Phe Val Ile Asp Val Leu His Pro Gly  
20 25 30

Arg Ala Asn Val Ser Lys Ala Glu Leu Lys Glu Lys Leu Ala Arg Met  
35 40 45

Tyr Glu Val Lys Asp Pro Asn Ala Ile Phe Cys Phe Lys Phe Arg Thr  
50 55 60

His Phe Gly Gly Gly Lys Ser Ser Gly Tyr Gly Leu Ile Tyr Asp Thr  
65 70 75 80

Val Glu Asn Ala Lys Lys Phe Glu Pro Lys Tyr Arg Leu Ile Arg Asn  
85 90 95

Gly Leu Asp Thr Lys Ile Glu Lys Ser Arg Lys Gln Ile Lys Glu Arg  
100 105 110

Lys Asn Arg Ala Lys Lys Ile Arg Gly Val Lys Lys Thr Lys Ala Gly  
115 120 125

Asp Thr Lys Lys Lys  
130

<210> 2581

<211> 297

<212> DNA

<213> Arabidopsis thaliana

<400> 2581

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cactcatcaa acaatgtcgc tattcctaaa ggacaccttg cggtttacgt aggagagatg 120

047-E2F-PCT.ST25.txt

atgcagaaga ggagattcgt ggttccagt acataactaa gtcacccttg ttttcaaag 180  
 cttctaagaa aagcagaaga agagtttggg ttgatcacc caatgggtgg cctcactatt 240  
 ccctgcactg aacaaatcct catcgatctc gcctctcgcc ttagcacttc atcgtga 297

<210> 2582

<211> 98

<212> PRT

<213> Arabidopsis thaliana

<400> 2582

Met Ala Ile Arg Ile Ser Arg Val Leu Gln Ser Ser Lys Gln Leu Leu  
 1 5 10 15

Lys Ser Leu Ser His Ser Ser Asn Asn Val Ala Ile Pro Lys Gly His  
 20 25 30

Leu Ala Val Tyr Val Gly Glu Met Met Gln Lys Arg Arg Phe Val Val  
 35 40 45

Pro Val Thr Tyr Leu Ser His Pro Cys Phe Gln Lys Leu Leu Arg Lys  
 50 55 60

Ala Glu Glu Glu Phe Gly Phe Asp His Pro Met Gly Gly Leu Thr Ile  
 65 70 75 80

Pro Cys Thr Glu Gln Ile Phe Ile Asp Leu Ala Ser Arg Leu Ser Thr  
 85 90 95

Ser Ser

<210> 2583

<211> 1008

<212> DNA

<213> Arabidopsis thaliana

<400> 2583  
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gctgttgcgg cgaagattta tactggtcct agagctcaag gtaactacaa tcttccaaaa 180  
 cattgtgaca acaatgaggt tcttaaggct ctttgttctg aagctggttg ggttgttgaa 240  
 gaagacggaa ctacttatcg caagggacac aagcctctac ctggtgacat ggctggatca 300  
 tcttctcgag caactcctta ctcttcccat aaccaaagtc ctcttcttc cacttttgat 360  
 agccccatct tatcttacca agtcagtcct tctcttctt cattcccgag tcttctcgca 420  
 gttggtgac cacacaatat ctccacaatc tcccctttcc tcaggaatgg tggatttcct 480  
 tcactgcctc ctccacttag aatctcaaac agtgctcctg tcactccacc agtgctatcc 540  
 ccaacttcta gaaaccccaa accattgcct acttgggaat cttttaccaa acaatccatg 600  
 tccatggctg ctaaacagtc aatgacttct ttgaactacc cgtttatgc ggtgtctgca 660  
 cctgccagtc ctactcatca tcgccagttc catgctccgg ctactatacc tgaatgtgat 720  
 gagtctgact ctccactgtg tgattctggt cattggataa gctttcaaaa gtttgcacaa 780  
 caacagccat tctctgcctc tatggtgcca acctgccta cttcaatct cgtgaaacct 840  
 gcaccacagc aattgtctcc aaacacagca gcaatccaag agattgttca aagctccgag 900  
 ttttaagttg agaacagcca agttaagcca tgggaagggg agaggatcca tgatgtggct 960  
 atggaggatc tagagctcac gcttggaat ggtaaagctc atagtgtga 1008

&lt;210&gt; 2584

&lt;211&gt; 335

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2584

Met Thr Ser Asp Gly Ala Thr Ser Thr Ser Ala Ala Ala Ala Ala Ala  
 1 5 10 15

Ala Met Ala Thr Arg Arg Lys Pro Ser Trp Arg Glu Arg Glu Asn Asn  
 20 25 30

Arg Arg Arg Glu Arg Arg Arg Arg Ala Val Ala Ala Lys Ile Tyr Thr  
 35 40 45

Gly Leu Arg Ala Gln Gly Asn Tyr Asn Leu Pro Lys His Cys Asp Asn  
 50 55 60

Asn Glu Val Leu Lys Ala Leu Cys Ser Glu Ala Gly Trp Val Val Glu  
 65 70 75 80

047-E2F-PCT.ST25.txt

Glu Asp Gly Thr Thr Tyr Arg Lys Gly His Lys Pro Leu Pro Gly Asp  
85 90 95

Met Ala Gly Ser Ser Ser Arg Ala Thr Pro Tyr Ser Ser His Asn Gln  
100 105 110

Ser Pro Leu Ser Ser Thr Phe Asp Ser Pro Ile Leu Ser Tyr Gln Val  
115 120 125

Ser Pro Ser Ser Ser Ser Phe Pro Ser Pro Ser Arg Val Gly Asp Pro  
130 135 140

His Asn Ile Ser Thr Ile Phe Pro Phe Leu Arg Asn Gly Gly Ile Pro  
145 150 155 160

Ser Ser Leu Pro Pro Leu Arg Ile Ser Asn Ser Ala Pro Val Thr Pro  
165 170 175

Pro Val Ser Ser Pro Thr Ser Arg Asn Pro Lys Pro Leu Pro Thr Trp  
180 185 190

Glu Ser Phe Thr Lys Gln Ser Met Ser Met Ala Ala Lys Gln Ser Met  
195 200 205

Thr Ser Leu Asn Tyr Pro Phe Tyr Ala Val Ser Ala Pro Ala Ser Pro  
210 215 220

Thr His His Arg Gln Phe His Ala Pro Ala Thr Ile Pro Glu Cys Asp  
225 230 235 240

Glu Ser Asp Ser Ser Thr Val Asp Ser Gly His Trp Ile Ser Phe Gln  
245 250 255

Lys Phe Ala Gln Gln Gln Pro Phe Ser Ala Ser Met Val Pro Thr Ser  
260 265 270

Pro Thr Phe Asn Leu Val Lys Pro Ala Pro Gln Gln Leu Ser Pro Asn  
275 280 285

Thr Ala Ala Ile Gln Glu Ile Gly Gln Ser Ser Glu Phe Lys Phe Glu  
290 295 300

Asn Ser Gln Val Lys Pro Trp Glu Gly Glu Arg Ile His Asp Val Ala  
305 310 315 320

Met Glu Asp Leu Glu Leu Thr Leu Gly Asn Gly Lys Ala His Ser  
325 330 335

&lt;210&gt; 2585

&lt;211&gt; 615

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2585

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atgtcaagtc ttcttaatat atctcactgt agctatcatg gatactcagg actcactagt      60
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ttgtcgtttc caagagccga gtcttctata aacatcacta tgggttgtag gcttcagcgt      180
gggatagcaa aaagcttaag tcaggaaaac ctagtggagt tatctgatga aaatgatgat      240
ctatgtcctg tggagtgtgt cactgagttc aagacagatg atgaattgct tagcgttctt      300
gaaaagtcga aagaaactaa ttctttggtt gtggttgatt ttatcgcac tgcatgtggg      360
agttgtaaat acatagagca gggcttctca aaactgtgca agcaatctgg tgaccaagaa      420
gtcctcgtaa tcttccttaa gcataatgtg gtagatgaat atgatgaaca atctgaagtc      480
gcagaaagcg tccgatacaa ggcggttcct ctctccact tctacaaaaa cggagtcttc      540
ttagaatcat ttgcaactag agacaaggag aggatcgacg cagctattct caaatatata      600
tcctcggaat cttga                                     615

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&lt;210&gt; 2586

&lt;211&gt; 204

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2586

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Met Ser Ser Leu Leu Asn Ile Ser His Cys Ser Tyr His Gly Tyr Ser
 1          5          10          15

Gly Leu Thr Ser Arg Gly Gly Ile Asn Thr Val Glu Asn His Arg Trp
          20          25          30

Val Trp His Asn Asn Gly Val Arg Leu Ser Phe Pro Arg Ala Glu Ser
          35          40          45

Ser Ile Asn Ile Thr Met Gly Cys Thr Leu Gln Arg Gly Ile Ala Lys
 50          55          60

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Ser Leu Ser Gln Glu Asn Leu Val Glu Leu Ser Asp Glu Asn Asp Asp  
65 70 75 80

Leu Cys Pro Val Glu Cys Val Thr Glu Phe Lys Thr Asp Asp Glu Leu  
85 90 95

Leu Ser Val Leu Glu Lys Ser Lys Glu Thr Asn Ser Leu Val Val Val  
100 105 110

Asp Phe Tyr Arg Thr Ala Cys Gly Ser Cys Lys Tyr Ile Glu Gln Gly  
115 120 125

Phe Ser Lys Leu Cys Lys Gln Ser Gly Asp Gln Glu Ala Pro Val Ile  
130 135 140

Phe Leu Lys His Asn Val Val Asp Glu Tyr Asp Glu Gln Ser Glu Val  
145 150 155 160

Ala Glu Arg Leu Arg Ile Lys Ala Val Pro Leu Phe His Phe Tyr Lys  
165 170 175

Asn Gly Val Leu Leu Glu Ser Phe Ala Thr Arg Asp Lys Glu Arg Ile  
180 185 190

Asp Ala Ala Ile Leu Lys Tyr Thr Ser Ser Glu Ser  
195 200

<210> 2587

<211> 597

<212> DNA

<213> Arabidopsis thaliana

<400> 2587

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tcttcgactt cgtcttttct tagaggcgat ttgagttttt ccccaaaac ctctttcacg	120
gtgactcttc ctctggaaaa tcttcaagct cggattccgt tgacaattga atcgggccat	180
aagaaggag ctggtagcac caagaacggt cgtgattctc ctgggcaacg actcggcgtc	240
aagatctacg gtgaccaagt tgctaaacct ggtgctatca ttgttcgtca acgtggcact	300
aagtccatg ctgggaaaaa tgttgggatt ggtaaagatc ataccatctt ctctttaatc	360
gatggattag tcaagttcga gaagtttggt cctgacagga agaagataag tgtgtatcca	420
agagaaattg taccagagaa tcccaatagc tacagagcaa gaaagagaga aaacttcaga	480

ttgcaaaggg agaagaagaa ggcgagacgc gagaattact cgtacacact tcctacacca 540  
 gaacttggtc ttgcatctgc ctgagtcgat gatgctgaag ccaatccgga gtgctag 597

<210> 2588

<211> 198

<212> PRT

<213> Arabidopsis thaliana

<400> 2588

Met Ala Met Ala Thr Ser Met Ser Leu Asn Leu Ile Gly Ala Phe Lys  
 1 5 10 15

Gly Leu Ser Leu Ser Ser Thr Ser Ser Phe Leu Arg Gly Asp Leu Ser  
 20 25 30

Phe Ser Pro Lys Thr Ser Phe Thr Val Thr Leu Pro Leu Glu Asn Leu  
 35 40 45

Gln Ala Pro Ile Pro Leu Thr Ile Glu Ser Ala His Lys Lys Gly Ala  
 50 55 60

Gly Ser Thr Lys Asn Gly Arg Asp Ser Pro Gly Gln Arg Leu Gly Val  
 65 70 75 80

Lys Ile Tyr Gly Asp Gln Val Ala Lys Pro Gly Ala Ile Ile Val Arg  
 85 90 95

Gln Arg Gly Thr Lys Phe His Ala Gly Lys Asn Val Gly Ile Gly Lys  
 100 105 110

Asp His Thr Ile Phe Ser Leu Ile Asp Gly Leu Val Lys Phe Glu Lys  
 115 120 125

Phe Gly Pro Asp Arg Lys Lys Ile Ser Val Tyr Pro Arg Glu Ile Val  
 130 135 140

Pro Glu Asn Pro Asn Ser Tyr Arg Ala Arg Lys Arg Glu Asn Phe Arg  
 145 150 155 160

Leu Gln Arg Glu Lys Lys Lys Ala Arg Arg Glu Asn Tyr Ser Tyr Thr  
 165 170 175

Leu Pro Thr Pro Glu Leu Val Leu Ala Ser Ala Ser Val Asp Asp Ala  
 180 185 190

Glu Ala Asn Pro Glu Cys  
195

<210> 2589

<211> 198

<212> DNA

<213> Arabidopsis thaliana

<400> 2589  
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ctcgaggctt ccaacaagt taaagctcct ccacttaccg atgtgattgc tgggtgcaca 180  
gggaagaaac agagttaa 198

<210> 2590

<211> 65

<212> PRT

<213> Arabidopsis thaliana

<400> 2590  
Met Pro Val Met Glu Lys Leu Arg Met Phe Val Ala Gln Glu Pro Val  
1 5 10 15  
Val Ala Ala Ser Cys Leu Ile Gly Gly Val Gly Leu Phe Leu Pro Ala  
20 25 30  
Val Val Arg Pro Ile Leu Asp Ser Leu Glu Ala Ser Lys Gln Val Lys  
35 40 45  
Ala Pro Pro Leu Thr Asp Val Ile Ala Gly Val Thr Gly Lys Lys Gln  
50 55 60

Ser  
65

<210> 2591

<211> 1398

<212> DNA

<213> *Arabidopsis thaliana*

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<400> 2591
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cgtagcttaa gaacctcttc tgtacgagct ggcctaatacg agccagatgg tgggaaaactt    180
gtggatcttg ttgtaccgga accgagacgg cgagagaaga aacacgaagc ggcggatttg    240
ccgagagtga gattgacggc gattgatttg caatggatgc atgtgttgag tgaagggttg    300
gctagtccct ttcgtgggtt tatgagggaa tctgagtccc tccaaactct tcatttcaat    360
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gatgatcaac aaaaagccct aatcggtgaa tctaaacgtg tctcccttgt tgattctgat    480
gataatccaa tcgctattct caatgatatt gagatttata aacatccgaa agaagagcga    540
atagcgagaa cttgggggtac gactgcaccg ggtttgcctt atgtagaaga ggcgataacc    600
aatgctggag actggctcat tgggggtgat cttgagggtt tggaacctgt taagtacaat    660
gatgggcttg atcgtttcag gctttccccg ttgaaactgc gtaaggagct agagaaacgt    720
ggtgctggat cggtctttgc gtttcagctt aggaaccagc ttcataatgg acatgctctt    780
cttatgactg atactctgag gagacttctt gagatgggtt ataaaaacc tacccttttg    840
cttcacccat tgggaggggt tacaaaaagct gatgatgttc ctctaagctg gcgaatgaaa    900
cagcacgaga aggtgctaga ggatggtggt cttgatccag agactactgt ggtttccata    960
ttcccatctc caatgctcta tgctggtcca accgaagtc aatggcacgc aaaggctagg    1020
atcaatgctg gtgctaactt ctacattgtc ggtagggtac cggctggaat gggctatccc    1080
gtggagaaac gtgatctgta cgatgctgat cagggaaga aagttctaag catggctcct    1140
ggactcgaac gactcaacat tcttccttcc agggttgctg cgtacgataa gacacaagga    1200
aagatggcct tctttgatcc ctcaagggtc caggacttct tgttcatttc tggcactaag    1260
atgagagcat tggcaaaaga cacagagaac ccaccagatg gatttatgtg ccctggaggc    1320
tggaaggtcc ttgtggatta ctacgacagt ttgacactaa ccggaacac caaactccg    1380
gaaaagattc cggtttaa                                1398

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&lt;210&gt; 2592

&lt;211&gt; 465

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2592

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Met Ala Ser Met Ser Thr Val Phe Pro Lys Pro Thr Ser Phe Ile Ser
1      5      10      15
Gln Pro Leu Thr Lys Ser His Lys Ser Asp Ser Val Thr Thr Ser Ile
20      25      30
Ser Phe Pro Ser Asn Ser Lys Thr Arg Ser Leu Arg Thr Ile Ser Val
35      40      45
Arg Ala Gly Leu Ile Glu Pro Asp Gly Gly Lys Leu Val Asp Leu Val
50      55      60
Val Pro Glu Pro Arg Arg Arg Glu Lys Lys His Glu Ala Ala Asp Leu
65      70      75      80
Pro Arg Val Arg Leu Thr Ala Ile Asp Leu Gln Trp Met His Val Leu
85      90      95
Ser Glu Gly Trp Ala Ser Pro Leu Arg Gly Phe Met Arg Glu Ser Glu
100     105     110
Phe Leu Gln Thr Leu His Phe Asn Leu Leu Asn Leu Asp Asp Gly Ser
115     120     125
Val Val Asn Met Ser Val Pro Ile Val Leu Ala Ile Asp Asp Gln Gln
130     135     140
Lys Ala Leu Ile Gly Glu Ser Lys Arg Val Ser Leu Val Asp Ser Asp
145     150     155     160
Asp Asn Pro Ile Ala Ile Leu Asn Asp Ile Glu Ile Tyr Lys His Pro
165     170     175
Lys Glu Glu Arg Ile Ala Arg Thr Trp Gly Thr Thr Ala Pro Gly Leu
180     185     190
Pro Tyr Val Glu Glu Ala Ile Thr Asn Ala Gly Asp Trp Leu Ile Gly
195     200     205
Gly Asp Leu Glu Val Leu Glu Pro Val Lys Tyr Asn Asp Gly Leu Asp
210     215     220
Arg Phe Arg Leu Ser Pro Phe Glu Leu Arg Lys Glu Leu Glu Lys Arg
225     230     235     240

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Gly Ala Asp Ala Val Phe Ala Phe Gln Leu Arg Asn Pro Val His Asn  
245 250 255

Gly His Ala Leu Leu Met Thr Asp Thr Arg Arg Arg Leu Leu Glu Met  
260 265 270

Gly Tyr Lys Asn Pro Ile Leu Leu Leu His Pro Leu Gly Gly Phe Thr  
275 280 285

Lys Ala Asp Asp Val Pro Leu Ser Trp Arg Met Lys Gln His Glu Lys  
290 295 300

Val Leu Glu Asp Gly Val Leu Asp Pro Glu Thr Thr Val Val Ser Ile  
305 310 315 320

Phe Pro Ser Pro Met Leu Tyr Ala Gly Pro Thr Glu Val Gln Trp His  
325 330 335

Ala Lys Ala Arg Ile Asn Ala Gly Ala Asn Phe Tyr Ile Val Gly Arg  
340 345 350

Asp Pro Ala Gly Met Gly His Pro Val Glu Lys Arg Asp Leu Tyr Asp  
355 360 365

Ala Asp His Gly Lys Lys Val Leu Ser Met Ala Pro Gly Leu Glu Arg  
370 375 380

Leu Asn Ile Leu Pro Phe Arg Val Ala Ala Tyr Asp Lys Thr Gln Gly  
385 390 395 400

Lys Met Ala Phe Phe Asp Pro Ser Arg Ala Gln Asp Phe Leu Phe Ile  
405 410 415

Ser Gly Thr Lys Met Arg Ala Leu Ala Lys Asn Arg Glu Asn Pro Pro  
420 425 430

Asp Gly Phe Met Cys Pro Gly Gly Trp Lys Val Leu Val Asp Tyr Tyr  
435 440 445

Asp Ser Leu Thr Leu Thr Gly Asn Thr Lys Leu Pro Glu Lys Ile Pro  
450 455 460

Val  
465

<210> 2593

&lt;211&gt; 1926

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2593

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aagaatcact cggtttctgg aaagtcgagg tctttcgatc ttagcctcag agcttcagggt   180
cccattagag caagctctgt agtaacagaa gcaagcccta ccaacttaaa ttccaaagaa   240
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ctactgaagc tgggatttct gggttagagct ggagttcgaa gtgctcagag agcagggaagt   360
cttgtcaaaa gtgttaagga aatgaagctc cagaacacag atgaaggaaac tcaacctgta   420
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gcaaaagtta ataacttcat tttggtgaca tccttgggga caataaatt tggatttccc   660
gctgcgattc tcaacctatt ctggggagtt ctttgctgga agagaaaagc tgaagaagca   720
ttgattgaaa gcgggtctaa ttacgaata gttagacctg gaggaatgga gagaccgact   780
gatgcataca aagaaactca taatctcact ctgtctctag acgatacatt gtttggtggt   840
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aagcttcttg aaaagattcc ttccaaacgg ccttatgtcc ctccaccgaa ggcctcagtt  1020
gcaaccaaa aggtcaaac accctctact aagcctgtca ctcaagaacc aacagctcct  1080
aaagaggatg aagcacctcc aaaagaaaaa aatgtgaaac ctaggccgct gtctccttat  1140
gcctctctag aagacttgaa acctccaaca tctcctattc caaattcgac cacatcggtc  1200
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gtcactgaga cctcagttgc aacaagtgtg cctgagacag cagttgcaac gaggtgcact  1560
gagacagcag caccagccac atcaaaaatg aggcctcttt ctcttatgac aatttacgca  1620

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 aatctgaaca caattccacc ttctacaccg gaagcagtagc ctgttggttag cagtgcgata 1800  
 gacacttccc ttgcttcagg agacaataca gctcagccaa agccaaggcc tttatcacct 1860  
 tacacaatgt acgcgagcat gaagcctcca acatcaccac ttccatctcc agtcaccaat 1920  
 cattag 1926

<210> 2594

<211> 641

<212> PRT

<213> Arabidopsis thaliana

<400> 2594

Met Glu Gly Thr Cys Phe Leu Arg Gly Gln Pro Leu Thr Thr Ile Pro  
 1 5 10 15

Ser Leu Pro Ser Arg Lys Gly Phe Leu Leu Gln Arg Trp Lys Thr Asn  
 20 25 30

Arg Ile Val Arg Phe Ser Gly Phe Lys Asn His Ser Val Ser Gly Lys  
 35 40 45

Ser Arg Ser Phe Asp Leu Ser Leu Arg Ala Ser Gly Pro Ile Arg Ala  
 50 55 60

Ser Ser Val Val Thr Glu Ala Ser Pro Thr Asn Leu Asn Ser Lys Glu  
 65 70 75 80

Glu Asp Leu Val Phe Val Ala Gly Ala Thr Gly Lys Val Gly Ser Arg  
 85 90 95

Thr Val Arg Glu Leu Leu Lys Leu Gly Phe Arg Val Arg Ala Gly Val  
 100 105 110

Arg Ser Ala Gln Arg Ala Gly Ser Leu Val Gln Ser Val Lys Glu Met  
 115 120 125

Lys Leu Gln Asn Thr Asp Glu Gly Thr Gln Pro Val Glu Lys Leu Glu  
 130 135 140

Ile Val Glu Cys Asp Leu Glu Lys Lys Asp Ser Ile Gln Pro Ala Leu  
 145 150 155 160



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Gly Asn Ala Ser Val Ile Ile Cys Cys Ile Gly Ala Ser Glu Lys Glu  
165 170 175

Ile Ser Asp Ile Thr Gly Pro Tyr Arg Ile Asp Tyr Leu Ala Thr Lys  
180 185 190

Asn Leu Val Asp Ala Ala Thr Ser Ala Lys Val Asn Asn Phe Ile Leu  
195 200 205

Val Thr Ser Leu Gly Thr Asn Lys Phe Gly Phe Pro Ala Ala Ile Leu  
210 215 220

Asn Leu Phe Trp Gly Val Leu Cys Trp Lys Arg Lys Ala Glu Glu Ala  
225 230 235 240

Leu Ile Glu Ser Gly Leu Asn Tyr Ala Ile Val Arg Pro Gly Gly Met  
245 250 255

Glu Arg Pro Thr Asp Ala Tyr Lys Glu Thr His Asn Leu Thr Leu Ala  
260 265 270

Leu Asp Asp Thr Leu Phe Gly Gly Gln Val Ser Asn Leu Gln Val Ala  
275 280 285

Glu Leu Leu Ala Cys Met Ala Lys Asn Pro Gln Leu Ser Phe Ser Lys  
290 295 300

Ile Val Glu Val Val Ala Glu Thr Thr Ala Pro Leu Thr Pro Ile Glu  
305 310 315 320

Lys Leu Leu Glu Lys Ile Pro Ser Lys Arg Pro Tyr Val Pro Pro Pro  
325 330 335

Lys Ala Ser Val Ala Thr Lys Glu Val Lys Pro Val Pro Thr Lys Pro  
340 345 350

Val Thr Gln Glu Pro Thr Ala Pro Lys Glu Asp Glu Ala Pro Pro Lys  
355 360 365

Glu Lys Asn Val Lys Pro Arg Pro Leu Ser Pro Tyr Ala Ser Tyr Glu  
370 375 380

Asp Leu Lys Pro Pro Thr Ser Pro Ile Pro Asn Ser Thr Thr Ser Val  
385 390 395 400

Ser Pro Ala Lys Ser Lys Glu Val Asp Ala Thr Gln Val Pro Val Glu  
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Ala Asn Val Val Pro Val Pro Asp Ser Thr Ser Asn Val Pro Val Val  
420 425 430

Glu Val Lys Gln Val Glu Glu Lys Lys Glu Arg Pro Leu Ser Pro Tyr  
435 440 445

Ala Arg Tyr Glu Asn Leu Lys Pro Pro Ser Ser Pro Ser Pro Thr Ala  
450 455 460

Ser Ser Thr Arg Lys Ser Asp Ser Leu Ser Pro Gly Pro Thr Asp Ser  
465 470 475 480

Asp Thr Asp Lys Ser Ser Thr Val Ala Lys Thr Val Thr Glu Thr Ala  
485 490 495

Val Ala Thr Ser Val Thr Glu Thr Ser Val Ala Thr Ser Val Pro Glu  
500 505 510

Thr Ala Val Ala Thr Ser Val Thr Glu Thr Ala Ala Pro Ala Thr Ser  
515 520 525

Lys Met Arg Pro Leu Ser Pro Tyr Ala Ile Tyr Ala Asp Leu Lys Pro  
530 535 540

Pro Thr Ser Pro Thr Pro Ala Ser Thr Gly Pro Lys Glu Ala Ala Ser  
545 550 555 560

Val Glu Asp Asn Ser Glu Leu Pro Gly Gly Asn Asn Asp Val Leu Lys  
565 570 575

Thr Val Asp Gly Asn Leu Asn Thr Ile Pro Pro Ser Thr Pro Glu Ala  
580 585 590

Val Pro Val Val Ser Ser Ala Ile Asp Thr Ser Leu Ala Ser Gly Asp  
595 600 605

Asn Thr Ala Gln Pro Lys Pro Arg Pro Leu Ser Pro Tyr Thr Met Tyr  
610 615 620

Ala Asp Met Lys Pro Pro Thr Ser Pro Leu Pro Ser Pro Val Thr Asn  
625 630 635 640

His

&lt;210&gt; 2595

&lt;211&gt; 1989

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2595

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gttgtaccag atgtttcccc cattgaatgc ctttctgctg agactttaac cgataagacc      180
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cagtccttca gctcttctc tcttgatgag aaagctagcg ttgatgactt tcttctctggg      360
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gagtccttct cctcgctgtg gacatccatt acaaagaatg cttctgaagt ttagatagat      480
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ctgctgagcg aatcagttag tcttggagag agatctgtaa caaatggagt tctttttgtt      660
gtgtactctt atggatcagc aaaagaatta ctctctccag atgtaaagag tgcccttaac      720
tcgtcagaag atgttgctct aaaagtattg agtcccgtgg gagctgtatt gcagcaggta      780
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gatctcgga gatcagctcg atttcgatat tctagcgtga cactgcctga ggttggtttt      1080
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aaagggtgaa gtgaagtaga tgatatcttg acagcagtaa tcatcaagaa cttgaaaata      1260
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gaagcgtaa 1989

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&lt;210&gt; 2596

&lt;211&gt; 662

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2596

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Met Val Tyr Asn Met Ser Glu Ala Phe Val Ala Ser Asp Glu Gly Leu
1      5      10      15

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Thr Tyr Val Glu Asn Gly Glu Asp Val Phe Pro Val Glu Ala Val Ala
20      25      30

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Ala Asp Val Ser Pro Val Glu Ala Val Val Pro Asp Val Ser Pro Ile
35      40      45

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Glu Cys Leu Ser Ala Glu Thr Leu Thr Asp Lys Thr Ser Ser Leu Ile
50      55      60

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Asp Ser Val Glu Ser Gly Thr Asn Ala Thr Val Lys Ile Ser Pro Asp
65      70      75      80

```

```

Ser Ser Val Ser Leu Pro Asp Ala Lys Ala Ser Phe Asp Asp Phe Ser
85      90      95

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```

Ser Gly Leu Lys Gln Ser Phe Ser Ser Ser Leu Pro Asp Ala Lys Ala
100     105

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```

Ser Val Asp Asp Phe Ser Ser Gly Val Lys Glu Ser Phe Ser Ser Ser
115     120     125

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Leu Asn Gln Gly Glu Asn Ala Val Lys Asn Thr Leu Glu Ser Phe Ser
130     135     140

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Ser Ser Val Thr Ser Ile Thr Lys Asn Ala Ser Glu Val Val Asp Ser  
145 150 155 160

Ala Val Asn Arg Ala Phe Ser Thr Leu Asp Gln Thr Gly Asp Val Ala  
165 170 175

Gly Asp Lys Phe Ser Ser Phe Ser Thr Gly Leu Lys Glu Ala Ser Asn  
180 185 190

Arg Ala Ala Val Ile Ala Ile Asp Leu Leu Arg Gln Ser Val Ser Leu  
195 200 205

Gly Glu Arg Ser Val Thr Asn Gly Val Ser Phe Val Val Tyr Ser Tyr  
210 215 220

Gly Ser Ala Lys Glu Leu Leu Pro Pro Asp Val Lys Ser Ala Leu Asn  
225 230 235 240

Ser Ser Glu Asp Val Ala Leu Lys Val Leu Ser Pro Val Gly Ala Val  
245 250 255

Leu Gln Gln Val Ser Val Ala Ile Gly Gly Leu Glu Arg Asn Ile Gly  
260 265 270

Leu Asp Pro Asp Asp Pro Ile Leu His Leu Phe Leu Phe Val Gly Thr  
275 280 285

Thr Gly Thr Phe Trp Val Leu Tyr Arg Val Trp Thr Tyr Gly Gly Tyr  
290 295 300

Ala Gly Asp Leu Ser Pro Lys Ser Thr Leu Asp Leu Leu Lys Ser Arg  
305 310 315 320

Asp Lys Ser Val Leu Ile Asp Val Arg Pro Glu Ala Leu Arg Glu Lys  
325 330 335

Asp Gly Ile Pro Asp Leu Arg Arg Ser Ala Arg Phe Arg Tyr Ser Ser  
340 345 350

Val Thr Leu Pro Glu Val Gly Phe Ser Ile Leu Ile Val Val Asp His  
355 360 365

Ser Glu Tyr Arg Asn Ser Thr His Val Ile Tyr Glu His Asn Glu Val  
370 375 380

Ser Ala Ile Ser Ala Thr Glu Val Asp Gly Asp Val Lys Arg Leu Leu  
Page 3631

385 390 400  
Lys Gly Gly Ser Glu Val Asp Asp Ile Leu Thr Ala Val Ile Ile Lys  
405 410 415  
Asn Leu Lys Ile Val Gln Asp Arg Ser Lys Val Val Val Met Asp Ala  
420 425 430  
Asp Gly Thr Arg Ser Lys Gly Gly Tyr Arg Ser Trp Val Gln Glu Gly  
435 440 445  
Leu Arg Val Lys Glu Pro Lys Pro Glu Thr Thr Leu Thr Ile Leu Asn  
450 455 460  
Glu Glu Ala Glu Ala Ile Phe Glu Asp Ile Asn Pro Ser Pro Leu Gln  
465 470 475 480  
Leu Phe Gly Val Glu Tyr Leu Ile Phe Ser Thr Thr His Lys Leu Leu  
485 490 495  
Thr Ser Thr Phe Cys Thr Asn Met Ile Ala Leu Ser Leu Ala Glu Trp  
500 505 510  
Glu Lys Thr Leu Gln Leu Ile Ala Val Ile Gly Leu Ser Leu Phe Gln  
515 520 525  
Thr Leu Cys Arg Leu Tyr Thr Tyr Asp Phe Leu His Met Met Thr Pro  
530 535 540  
Lys Thr Ser Asn Lys Thr Ser Gly Ile Lys Ala Pro Ser Leu Asp Pro  
545 550 555 560  
Phe Ser Ile Ala Lys Thr Gln Arg Asn Leu Cys Ser Val Leu Thr Lys  
565 570 575  
Ile Val Ser Ser Ser Ser Arg Leu Leu Leu Ala Pro Val Lys Leu  
580 585 590  
Gly Ala Gln Ala Phe Ser Trp Ala Ala Gly Lys Leu Glu Thr Asn Gly  
595 600 605  
Val Gly Leu Pro Thr Ser Pro Ser Ser Ser Asp Val Arg Ser Arg Val  
610 615 620  
Leu Gln Ala Ala Ala Lys His Glu Ser Lys Pro Ser Asp Glu Thr Ser  
625 630 635 640

Glu Ser Leu Gln Asp Ala Ser Ser Ser Pro Glu Glu Ala Leu Asn Asn  
645 650 655

Val Asp Val Ser Glu Ala  
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<210> 2597

<211> 1506

<212> DNA

<213> *Arabidopsis thaliana*

<400> 2597

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ctcggccacc acctctctat caaacgcgcg gttcaccgtc tcttcaccg cctttccaat    180
atccatggcc caatcttcta cctccgactt ggttcccgcc gtgccgtcgt catatcttcc    240
tcctcgctgg caagagaatg cttcacaggt caaacgatg tcattgtatc aaaccgcct      300
cgttttctaa ctcctcaata cattgcttac aactacacaa ccacgcgaac aacatcttac    360
ggtgaccact ggcgtaacct ccgcccgcatt tgctccctcg aaatcgctc ctcaaaacgt    420
ctcgccaact tctccacat ccgcaaagag gagatccagc gcatgctaac gagactctca    480
cgtgacgccc gtgtcggcaa agaggtcgag ctcgagtcta tcttgtacga cctaacgttc    540
aacaatatcg tgaggatggt tacagggaag atatactacg gcgacgatgt cagcgacaaa    600
gaagaagcag agttgttcaa gaagcttttt actttcatca ccactaatag tggcgcgagg    660
catcctggag aatacttgcc cttcatgaag atattcggag ggagctttga gaaggagggtg    720
aaagctgcag caaaagtcat cgatgaaatg ttgcagcgtc tgcttgacga gtgcaagagt    780
gataaagacg gtaacactat ggtaaatcac ttgctctctt tgcaacagga cgacctgag      840
tactacactg acatcattat caaaggctta atgctgggta taatggttgc ctcacagag      900
acctccgctt tgacaataga gtgggcgatg gcgagtttgt tgaaccaccc aaaagttttg    960
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gcagcgccgg ttcttgtgcc aagatcaaca gcagaagaca tcaagatcgg aggatacgtat   1140
gtgccacgtg acacaatggt aatggtgaac gcgtgggcga tacatagaga tccagatctt   1200
tggaccgaac cggagaggtt taaccctgag aggttcaacg gtggagaagg agaaaaagat   1260
gatgttcgta tgctgatagc gtttggaagc ggacggagaa tatgtcccgg tgttggaacta   1320

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gcgcacaaga ttgtgacatt agcgtagga tcgttaattc aatgctttga ttgaaaaaag 1380  
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<210> 2598

<211> 501

<212> PRT

<213> Arabidopsis thaliana

<400> 2598

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Tyr Lys Phe Phe Phe Thr Ser Lys Lys Gln Arg Tyr Tyr Leu Pro Pro  
 20 25 30

Ser Pro Ser Tyr Ser Leu Pro Ile Leu Gly His His Leu Leu Ile Lys  
 35 40 45

Pro Pro Val His Arg Leu Phe His Arg Leu Ser Asn Ile His Gly Pro  
 50 55 60

Ile Phe Tyr Leu Arg Leu Gly Ser Arg Arg Ala Val Val Ile Ser Ser  
 65 70 75 80

Ser Ser Leu Ala Arg Glu Cys Phe Thr Gly Gln Asn Asp Val Ile Val  
 85 90 95

Ser Asn Arg Pro Arg Phe Leu Thr Ser Lys Tyr Ile Ala Tyr Asn Tyr  
 100 105 110

Thr Thr Ile Ala Thr Thr Ser Tyr Gly Asp His Trp Arg Asn Leu Arg  
 115 120 125

Arg Ile Cys Ser Leu Glu Ile Val Ser Ser Lys Arg Leu Ala Asn Phe  
 130 135 140

Leu His Ile Arg Lys Glu Glu Ile Gln Arg Met Leu Thr Arg Leu Ser  
 145 150 155 160

Arg Asp Ala Arg Val Gly Lys Glu Val Glu Leu Glu Ser Ile Leu Tyr  
 165 170 175



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Asp Leu Thr Phe Asn Asn Ile Val Arg Met Val Thr Gly Lys Ile Tyr  
 180 185 190  
 Tyr Gly Asp Asp Val Ser Asp Lys Glu Glu Ala Glu Leu Phe Lys Lys  
 195 200 205  
 Leu Phe Thr Phe Ile Thr Thr Asn Ser Gly Ala Arg His Pro Gly Glu  
 210 215 220  
 Tyr Leu Pro Phe Met Lys Ile Phe Gly Gly Ser Phe Glu Lys Glu Val  
 225 230 235 240  
 Lys Ala Ala Ala Lys Val Ile Asp Glu Met Leu Gln Arg Leu Leu Asp  
 245 250 255  
 Glu Cys Lys Ser Asp Lys Asp Gly Asn Thr Met Val Asn His Leu Leu  
 260 265 270  
 Ser Leu Gln Gln Asp Asp Pro Glu Tyr Tyr Thr Asp Ile Ile Ile Lys  
 275 280 285  
 Gly Leu Met Leu Gly Ile Met Val Ala Ser Ser Glu Thr Ser Ala Leu  
 290 295 300  
 Thr Ile Glu Trp Ala Met Ala Ser Leu Leu Asn His Pro Lys Val Leu  
 305 310 315 320  
 Asp Lys Val Lys Leu Glu Ile Asp Glu Ile Ile Gly Gln Asp Arg Leu  
 325 330 335  
 Ile Glu Glu Ser Asp Ile Ala Asn Leu Pro Tyr Leu Gln Asn Val Val  
 340 345 350  
 Ser Glu Thr Leu Arg Leu His Pro Ala Ala Pro Val Leu Val Pro Arg  
 355 360 365  
 Ser Thr Ala Glu Asp Ile Lys Ile Gly Gly Tyr Asp Val Pro Arg Asp  
 370 375 380  
 Thr Met Val Met Val Asn Ala Trp Ala Ile His Arg Asp Pro Asp Leu  
 385 390 395 400  
 Trp Thr Glu Pro Glu Arg Phe Asn Pro Glu Arg Phe Asn Gly Gly Glu  
 405 410 415  
 Gly Glu Lys Asp Asp Val Arg Met Leu Ile Ala Phe Gly Ser Gly Arg  
 Page 3635

Arg Ile Cys Pro Gly Val Gly Leu Ala His Lys Ile Val Thr Leu Ala  
435 440 445

Leu Gly Ser Leu Ile Gln Cys Phe Asp Trp Lys Lys Val Asn Glu Lys  
450 455 460

Glu Ile Asp Met Ser Glu Gly Pro Gly Met Ala Met Arg Met Met Val  
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Pro Leu Arg Ala Leu Cys Lys Thr Arg Pro Ile Met Asn Lys Leu Pro  
485 490 495

Ala Tyr Thr Lys Val  
500

<210> 2599

<211> 1506

<212> DNA

<213> Arabidopsis thaliana

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gtttacgtca tcaacaacgg catgtcaatt ctacacgta tcttcgctgg acacgtagga 240  
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cttctgcttg gaatgggaag tgcagtgga acattatgtg gtcaagcaca tggagctcat 360  
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gcctacatat cagctgcaac gcttgtgatc catctcatac tttcgtggat cgctgtgtat 660  
cgtcttggtt acggctcttt ggctttgtct ttgatacata gcttctcgtg gtggatcatt 720  
gttgtggctc agattgttta tatta aaatg agtccgagat gtcgtcggac ttgggaaggt 780  
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 gccggaacc cgagagcagc cgcgttctcc acagtcgtga caacgggagt atcattctta 1080  
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 gttcttggtc tcacttatga tatgggagct aagggaatat ggactgggat gattggtggt 1380  
 actttaatgc aaacaataat cttagtatt gtcactttac gaactgattg ggacaaagag 1440  
 gttgagaaag cttcgagcag attggaccag tgggaagaga gccgtgagcc gcttttgaag 1500  
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<210> 2600

<211> 501

<212> PRT

<213> Arabidopsis thaliana

<400> 2600

Met Asn Ser Glu Ser Leu Glu Asn Leu His Arg Pro Leu Ile Glu Ser  
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Ser Lys Ser Phe Val Asp Tyr Arg Leu Glu Thr Val Leu Thr Asp Arg  
 20 25 30

Glu Leu Pro Tyr Phe Arg Arg Ile Tyr Leu Ala Met Met Ile Glu Met  
 35 40 45

Lys Phe Leu Phe His Leu Ala Ala Pro Ala Ile Phe Val Tyr Val Ile  
 50 55 60

Asn Asn Gly Met Ser Ile Leu Thr Arg Ile Phe Ala Gly His Val Gly  
 65 70 75 80

Ser Phe Glu Leu Ala Ala Ala Ser Leu Gly Asn Ser Gly Phe Asn Met  
 85 90 95

Phe Thr Tyr Gly Leu Leu Leu Gly Met Gly Ser Ala Val Glu Thr Leu  
 100 105 110

047-E2F-PCT.ST25.txt

Cys Gly Gln Ala His Gly Ala His Arg Tyr Glu Met Leu Gly Val Tyr  
 115 120  
 Leu Gln Arg Ser Thr Val Val Leu Ile Leu Thr Cys Leu Pro Met Ser  
 130 135 140  
 Phe Leu Phe Leu Phe Ser Asn Pro Ile Leu Thr Ala Leu Gly Glu Pro  
 145 150 155 160  
 Glu Gln Val Ala Thr Leu Ala Ser Val Phe Val Tyr Gly Met Ile Pro  
 165 170 175  
 Val Ile Phe Ala Tyr Ala Val Asn Phe Pro Ile Gln Lys Phe Leu Gln  
 180 185 190  
 Ser Gln Ser Ile Val Thr Pro Ser Ala Tyr Ile Ser Ala Ala Thr Leu  
 195 200 205  
 Val Ile His Leu Ile Leu Ser Trp Ile Ala Val Tyr Arg Leu Gly Tyr  
 210 215 220  
 Gly Leu Leu Ala Leu Ser Leu Ile His Ser Phe Ser Trp Trp Ile Ile  
 225 230 235 240  
 Val Val Ala Gln Ile Val Tyr Ile Lys Met Ser Pro Arg Cys Arg Arg  
 245 250 255  
 Thr Trp Glu Gly Phe Ser Trp Lys Ala Phe Glu Gly Leu Trp Asp Phe  
 260 265 270  
 Phe Arg Leu Ser Ala Ala Ser Ala Val Met Leu Cys Leu Glu Ser Trp  
 275 280 285  
 Tyr Ser Gln Ile Leu Val Leu Leu Ala Gly Leu Leu Lys Asn Pro Glu  
 290 295 300  
 Leu Ala Leu Asp Ser Leu Ala Ile Cys Met Ser Ile Ser Ala Ile Ser  
 305 310 315 320  
 Phe Met Val Ser Val Gly Phe Asn Ala Ala Ala Ser Val Arg Val Ser  
 325 330 335  
 Asn Glu Leu Gly Ala Gly Asn Pro Arg Ala Ala Ala Phe Ser Thr Val  
 340 345 350  
 Val Thr Thr Gly Val Ser Phe Leu Leu Ser Val Phe Glu Ala Ile Val  
 355 360 365

Val Leu Ser Trp Arg His Val Ile Ser Tyr Ala Phe Thr Asp Ser Pro  
370 375 380

Ala Val Ala Glu Ala Val Ala Asp Leu Ser Pro Phe Leu Ala Ile Thr  
385 390 395 400

Ile Val Leu Asn Gly Ile Gln Pro Val Leu Ser Gly Val Ala Val Gly  
405 410 415

Cys Gly Trp Gln Ala Phe Val Ala Tyr Val Asn Ile Gly Cys Tyr Tyr  
420 425 430

Val Val Gly Ile Pro Val Gly Phe Val Leu Gly Phe Thr Tyr Asp Met  
435 440 445

Gly Ala Lys Gly Ile Trp Thr Gly Met Ile Gly Gly Thr Leu Met Gln  
450 455 460

Thr Ile Ile Leu Val Ile Val Thr Leu Arg Thr Asp Trp Asp Lys Glu  
465 470 475 480

Val Glu Lys Ala Ser Ser Arg Leu Asp Gln Trp Glu Glu Ser Arg Glu  
485 490 495

Pro Leu Leu Lys Gln  
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<210> 2601

<211> 546

<212> DNA

<213> Arabidopsis thaliana

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ctgcaatctg aactaatggg attgatgatg ggagctgacg cggggatatc tgcgtttcca 180  
gaggaagaca acatatcttg ctggaaaagga acaattacag gaagcaaaga tactgtgttc 240  
gaaggaactg agtacagact ctactcact ttctctaacg attatccttt taagtctccc 300  
aaagttaagt ttgagacatg ctgctccac cccaatgtgg atctctatgg caatatattgc 360  
ttggacattc ttcaggataa atgggtcatct gcttatgatg tgaggacgat attactctca 420

attcaaagcc ttctcggaga accgaacatc agctcaccat tgaacaatca agcggctcag 480  
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<210> 2602

<211> 181

<212> PRT

<213> Arabidopsis thaliana

<400> 2602

Met Ala Thr Val Asn Gly Tyr Thr Gly Asn Thr Pro Ala Ala Thr Thr  
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Pro Ala Ala Thr Gly Ser Lys Gln Ser Ala Pro Pro Thr Lys Thr Val  
 20 25 30

Asp Ser His Ser Val Leu Lys Arg Leu Gln Ser Glu Leu Met Gly Leu  
 35 40 45

Met Met Gly Ala Asp Pro Gly Ile Ser Ala Phe Pro Glu Glu Asp Asn  
 50 55 60

Ile Phe Cys Trp Lys Gly Thr Ile Thr Gly Ser Lys Asp Thr Val Phe  
 65 70 75 80

Glu Gly Thr Glu Tyr Arg Leu Ser Leu Thr Phe Ser Asn Asp Tyr Pro  
 85 90 95

Phe Lys Ser Pro Lys Val Lys Phe Glu Thr Cys Cys Phe His Pro Asn  
 100 105 110

Val Asp Leu Tyr Gly Asn Ile Cys Leu Asp Ile Leu Gln Asp Lys Trp  
 115 120 125

Ser Ser Ala Tyr Asp Val Arg Thr Ile Leu Leu Ser Ile Gln Ser Leu  
 130 135 140

Leu Gly Glu Pro Asn Ile Ser Ser Pro Leu Asn Asn Gln Ala Ala Gln  
 145 150 155 160

Leu Trp Ser Asn Gln Glu Glu Tyr Arg Lys Met Val Glu Lys Leu Tyr  
 165 170 175

Lys Pro Leu Asn Ala  
180

<210> 2603

<211> 699

<212> DNA

<213> Arabidopsis thaliana

<400> 2603

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gttcctatat ccagaagaga cgcgagtatt attctttcca gctcgattcc attgacaagc      180
ttcttcgttc taacaccgag ctcttccgaa gctagagaga gacgtagcag aaaagtattc      240
cctctcgagg aatattccac tggccctgaa gggttgaaat tctatgacat tgaggaaggc      300
aaagggtccag tagcaacaga gggatcaact gctcagggtc attttgattg ccgttacaga      360
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cagccttacg agttcaaggt gggatctacg ccaggaaagg aaaggaagcg tgaattcggt      480
gataatccaa atgggttatt ctctgcacag gctgcaccaa aacctctctc agcaatgtat      540
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<210> 2604

<211> 232

<212> PRT

<213> Arabidopsis thaliana

<400> 2604

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Arg Leu Pro Arg Ile Thr Ser Ile Ser Glu Ala Asp Gln Ser Arg Pro
20          25          30
Ile Asn Gln Val Val Ala Phe Ser Val Pro Ile Ser Arg Arg Asp Ala
35          40          45

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Ser Ile Ile Leu Leu Ser Ser Ile Pro Leu Thr Ser Phe Phe Val Leu  
50 55 60

Thr Pro Ser Ser Ser Glu Ala Arg Glu Arg Arg Ser Arg Lys Val Ile  
65 70 75 80

Pro Leu Glu Glu Tyr Ser Thr Gly Pro Glu Gly Leu Lys Phe Tyr Asp  
85 90 95

Ile Glu Glu Gly Lys Gly Pro Val Ala Thr Glu Gly Ser Thr Ala Gln  
100 105 110

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&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

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Glu Glu Glu Glu Lys Tyr Glu Thr Tyr Glu Ile Glu Val Glu Gln Pro
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165     170     175

Thr Gly Glu Leu Thr Glu Lys Glu Ile Ile Arg Ala Glu Arg Asn Ala
180     185     190

Gly Tyr Ile Ser Ser Arg Leu Arg Glu Ile Gln Met Gln Asn Tyr Leu
195     200     205

Lys Lys Lys Glu Gln Lys Ala Gln Arg Glu Lys Asp Leu Arg Glu Gly
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Glu Ser Val Leu Gly Ser Lys Pro Thr Pro Glu Glu Ala Ser Val Ala
3647

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&lt;211&gt; 460

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

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Ala Phe Pro Phe Gly Thr His Ala Ala Pro Leu Leu Thr Val Thr Arg
20      25

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Arg Leu Ala Ser Ala Ser Pro Ser Thr Val Phe Ser Phe Phe Asn Thr
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Ala Gln Ser Asn Ser Ser Leu Phe Ser Ser Gly Asp Glu Ala Asp Arg
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Tyr Val Phe Ser Gly Arg Pro Gln Glu Ala Ile Glu Leu Phe Leu Gln
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Ile Gly Val Ile Ser Gly Met Glu Lys Ile Arg Val Lys Asp Thr Pro  
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195 200 205

His Gln Met Gly Leu Ala Leu Pro Arg Ala Thr Ala Val Phe Ile Asn  
210 215 220

Ser Phe Glu Asp Leu Asp Pro Thr Leu Thr Asn Asn Leu Arg Ser Arg  
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Phe Lys Arg Tyr Leu Asn Ile Gly Pro Leu Gly Leu Leu Ser Ser Thr  
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<400> 2612

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1 5 10 15

Glu Ser Gln Ser Pro Asn Pro Ser Leu Thr Lys Ser Lys Ser Gln Arg  
20 25 30

Lys Ile Lys Ser Ser Lys Glu Asn Ala Pro Pro Pro Asp Leu Asn Ser  
35 40 45

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Leu Ile Pro Asp His Arg Ser Ser Pro Ala Lys Leu Lys Ser Pro Leu  
 50 55 60  
 Pro Pro Arg Pro Pro Ser Ser Asn Pro Leu Lys Arg Lys Leu Ile Ala  
 65 70 75  
 Glu Ala Thr Ala Asp Asn Gly Val Ala Ile Gly Val Ser Asp Ser Gly  
 85 90 95  
 Val Lys Val Ile Val Arg Met Lys Pro Pro Ser Lys Gly Glu Glu Glu  
 100 105 110  
 Glu Met Ile Val Lys Lys Ile Ser Asn Asp Ala Leu Thr Ile Asn Glu  
 115 120 125  
 Gln Thr Phe Thr Phe Asp Ser Ile Ala Asp Pro Glu Ser Thr Gln Asp  
 130 135 140  
 Glu Ile Phe Gln Leu Val Gly Ala Pro Leu Val Glu Asn Cys Leu Ala  
 145 150 155 160  
 Gly Phe Asn Ser Ser Val Phe Ala Tyr Gly Gln Thr Gly Ser Gly Lys  
 165 170 175  
 Thr Tyr Thr Met Trp Gly Pro Ala Asn Gly Leu Leu Glu Glu His Leu  
 180 185 190  
 Ser Gly Asp Gln Arg Gly Leu Thr Pro Arg Val Phe Glu Leu Leu Phe  
 195 200 205  
 Ala Arg Leu Ser Glu Glu Gln Ala Lys His Ala Glu Arg Gln Leu Lys  
 210 215 220  
 Tyr Gln Cys Arg Cys Ser Phe Leu Glu Ile Tyr Asn Glu Gln Ile Thr  
 225 230 235 240  
 Asp Leu Leu Asp Pro Ser Leu Lys Asn Leu Met Ile Arg Glu Asp Val  
 245 250 255  
 Lys Ser Gly Val Tyr Val Glu Asn Leu Thr Glu Glu Tyr Val Lys Asn  
 260 265 270  
 Leu Lys Asp Leu Ser Lys Leu Leu Val Lys Gly Leu Ala Asn Arg Arg  
 275 280 285  
 Thr Gly Ala Thr Ser Val Asn Ala Glu Ser Ser Arg Ser His Cys Val  
 290 295 300

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Phe Thr Cys Val Val Glu Ser His Cys Lys Ser Val Ala Asp Gly Leu  
 305 310 315 320  
 Ser Ser Phe Lys Thr Ser Arg Ile Asn Leu Val Asp Leu Ala Gly Ser  
 325 330 335  
 Glu Arg Gln Lys Leu Thr Gly Ala Ala Gly Asp Arg Leu Lys Glu Ala  
 340 345 350  
 Gly Asn Ile Asn Arg Ser Leu Ser Gln Leu Gly Asn Leu Ile Asn Ile  
 355 360 365  
 Leu Ala Glu Ile Ser Gln Thr Gly Lys Gln Arg His Ile Pro Tyr Arg  
 370 375 380  
 Asp Ser Arg Leu Thr Phe Leu Leu Gln Glu Ser Leu Gly Gly Asn Ala  
 385 390 395 400  
 Lys Leu Ala Met Val Cys Ala Val Ser Pro Ser Gln Ser Cys Arg Ser  
 405 410 415  
 Glu Thr Phe Ser Thr Leu Arg Phe Ala Gln Arg Ala Lys Ala Ile Gln  
 420 425 430  
 Asn Lys Ala Ile Val Asn Glu Val Met Gln Asp Asp Val Asn Phe Leu  
 435 440 445  
 Arg Glu Val Ile Arg Gln Leu Arg Asp Glu Leu Gln Arg Val Lys Asp  
 450 455 460  
 Asp Lys Gly Asn Asn Pro Thr Asn Pro Asn Ala Tyr Thr Thr Ser  
 465 470 475 480  
 Trp Asn Ala Arg Arg Ser Leu Ser Leu Leu Arg Ser Phe Gly Leu Gly  
 485 490 495  
 His Pro Lys Ser Leu Pro Asn Gly Asp Asp Asp Gly Asp Thr Glu Met  
 500 505 510  
 Glu Ile Asp Glu Glu Ala Val Glu Arg Leu Cys Ala Gln Met Gly Leu  
 515 520 525  
 Ser Pro Pro Ala Glu Asp Asn Asn Gln Glu Met Ser Arg Val Glu Lys  
 530 535 540  
 Ile Asn Ser Ser Leu Gln Thr Val Val Leu Lys Asp Glu Ser Tyr Asn  
 Page 3655

545                      550                      560

Asn Ser His Leu Lys Ser Ser Glu Ala Thr Asp Val Asn Met Glu Asp  
565                      570                      575

Ala Cys Cys Gln Thr Glu Asn Asn Gly Ser Glu Thr Asp Asn Ala Leu  
580                      585                      590

Thr Val Ala Glu Thr Met Asp Asp Gly Ser Ser Val Gln Pro Asp Ser  
595                      600                      605

Ile Thr Asn Ser Leu His Ser Cys Ile Ser Asp Thr Asn Gln Gly Asn  
610                      615                      620

Ser Pro Ser Lys Ala Glu Asn Ile Pro Ser Cys Gln Asp Leu Val Ile  
625                      630                      635                      640

Glu Ala Asp Val Ser Ala Ile Val Ser Val Ala Asp Thr Ser Asn Asn  
645                      650                      655

Thr Glu Gln Val Ser Val Asn Pro Val Ser Pro Cys Leu Ser Val Ala  
660                      665                      670

Pro Val Ser Val Ser Pro Val Leu Ile Pro Pro Thr Glu Ser Ala Ser  
675                      680                      685

Pro Lys Ile Arg Asn Ser Arg Lys Ser Leu Arg Thr Thr Ser Met Ser  
690                      695                      700

Thr Ala Ser Gln Lys Asp Ile Glu Arg Ala Asn Gln Leu Thr Pro Glu  
705                      710                      715                      720

Val Val Glu Pro Ser Pro Ala Met Ser Thr Glu Val Leu Asn Leu Tyr  
725                      730                      735

Ser Ala Leu Ser Thr Lys Lys Ser Glu Ala Phe Pro Val Pro Thr Arg  
740                      745                      750

Gln Leu Ala Ala Ser Leu His Arg Gly Met Lys Leu Leu Asp Ser Tyr  
755                      760                      765

Arg Gln Ser Thr Ala Leu Arg Arg Ser Thr Phe Arg Leu Ser Tyr Lys  
770                      775                      780

Ala Leu Glu Cys Lys Pro Ser Thr Val Leu Ser Lys Ala Asp Val Glu  
785                      790                      795                      800

Val Gln Thr Tyr Pro Gln Ala Asp Glu Ile Ala Glu Asp Asn Ser Lys  
 805 810 815  
 Glu Val Leu Cys Ser Arg Cys Lys Cys Arg Ala Glu Cys Asp Ala Gln  
 820 825 830  
 Glu Ile Ser Asp Thr Ser Asn Leu Gln Leu Val Pro Ile Asp Asn Ser  
 835 840 845  
 Glu Gly Ser Glu Lys Ser Asn Phe Gln Val Pro Lys Ala Val Glu Lys  
 850 855 860  
 Val Leu Ala Gly Ser Ile Arg Arg Glu Met Ala Met Glu Glu Phe Cys  
 865 870 875 880  
 Thr Lys Gln Ala Ser Glu Ile Ser Gln Leu Asn Arg Leu Val Gln Gln  
 885 890 895  
 Tyr Lys His Glu Arg Glu Cys Asn Ala Ile Ile Gly Gln Thr Arg Glu  
 900 905 910  
 Asp Lys Ile Val Arg Leu Glu Ser Leu Met Asp Gly Val Leu Ser Lys  
 915 920 925  
 Asp Asp Phe Leu Asp Glu Glu Phe Ala Ser Leu Met His Glu His Lys  
 930 935 940  
 Leu Leu Lys Asp Met Tyr Glu Asn His Pro Glu Val Leu Gln Thr Arg  
 945 950 955 960  
 Ile Glu Leu Lys Arg Val Gln Glu Glu Leu Glu Ser Phe Lys Asn Phe  
 965 970 975  
 Tyr Gly Asp Met Gly Glu Arg Glu Val Leu Leu Glu Glu Ile His Asp  
 980 985 990  
 Leu Lys Ala Gln Leu Gln Cys Tyr Thr Asp Ser Ser Leu Thr Ser Ala  
 995 1000 1005  
 Arg Arg Arg Gly Ser Leu Leu Lys Leu Thr Tyr Ala Cys Asp Pro  
 1010 1015 1020  
 Asn Gln Ala Pro Gln Leu Asn Thr Ile Pro Glu Ser Val Asp Glu  
 1025 1030 1035  
 Gly Pro Glu Lys Thr Leu Glu Gln Glu Arg Leu Arg Trp Thr Glu  
 1040 1045 1050

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Ala Glu Ser Asn Trp Ile Ser Leu Ala Glu Glu Leu Arg Thr Glu  
 1055 1060 1065  
 Leu Asp Thr Asn Arg Leu Leu Met Glu Lys Gln Lys Arg Glu Leu  
 1070 1075 1080  
 Asp Thr Glu Lys Arg Cys Ala Glu Glu Leu Thr Glu Ala Met Gln  
 1085 1090 1095  
 Met Ala Met Gln Gly His Ala Arg Met Ile Glu Gln Tyr Ala Asp  
 1100 1105 1110  
 Leu Glu Glu Lys His Ile Gln Leu Leu Ala Arg His Arg Arg Ile  
 1115 1120 1125  
 Arg Glu Gly Ile Asp Asp Val Lys Lys Ala Ala Ala Arg Ala Gly  
 1130 1135 1140  
 Val Lys Gly Ala Glu Ser Arg Phe Ile Asn Ala Leu Ala Ala Glu  
 1145 1150 1155  
 Ile Ser Ala Leu Lys Val Gln Arg Glu Lys Glu Val Arg Tyr Phe  
 1160 1165 1170  
 Arg Asp Glu Asn Lys Ser Leu Gln Ser Gln Leu Arg Asp Thr Ala  
 1175 1180 1185  
 Glu Ala Val Gln Ala Ala Gly Glu Leu Leu Val Arg Phe Lys Glu  
 1190 1195 1200  
 Ala Glu Glu Gly Leu Thr Phe Ala Gln Lys Arg Ala Met Asp Ala  
 1205 1210 1215  
 Glu Tyr Glu Ala Ser Glu Ala Tyr Lys Lys Val Asp Lys Leu Lys  
 1220 1225 1230  
 Arg Lys Tyr Glu Thr Glu Ile Ser Thr Val Asn Gln Gln His Asn  
 1235 1240 1245  
 Ala Glu Pro Gln Asn Pro Ile Glu Ser Leu Gln Ala Ser Cys Asn  
 1250 1255 1260  
 Asp Asp Ala Met Ala Lys Tyr Asp Glu Pro Ser Ala Ser Asp Gly  
 1265 1270 1275  
 Asp Asn Gln Trp Arg Glu Glu Phe Gln Pro Phe Tyr Lys Lys Asp  
 1280 1285 1290



Glu Glu Leu Ser Lys Leu Ala Glu Pro Ser Trp Phe Ser Gly Tyr  
 1295 1300 1305

Asp Arg Cys Asn Ile  
 1310

<210> 2613

<211> 957

<212> DNA

<213> Arabidopsis thaliana

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tccgatcgga aaaactggat ggctgggtctt acgttgaga aactaactct aaacaagatc 180
gtgtggccag gaacgcatga ttcagccacc aacgatatcg gaatactctt gatctctcgt 240
ccttttagctg aatgccaatc gctctctatc tacgagcagc tcgtcctcgg gacacgtgtc 300
ctcgatatcc gtgtgcaaga ggatcgccaa atctgccacg ggattctgac gtcatacgaa 360
attgatgttg tcattgatga cgttatcaga ttcttgctcg agactcactc ggagattgta 420
atcctggaga taaggactga gtttgacac aaagatcctc cggggttcga gacttacttg 480
gcagacaagt taggtcaatt cttgatacat caagatgata gcttgttcaa caagccggta 540
tcagagattt tgccgaaaag ggttatatgc atctggaaac cttagagatc tccaagaccg 600
agccgtgggt gaattctctg gaactcagat tatctaaaag ataattggat cgatacggat 660
cttccatgga cgaattttc gaagcaattg aagcatctga gtgagcagca gccgacatct 720
tctagaaaat tcttttaccg ggttgagaac acggtcacgc cgcaagcaga taatccggtt 780
gtgtgggtta aaccggtgac tgatcggatc cgaataacac ccagactatt tatttctcag 840
tgtgtttcca agggatgtgg agataagttg cagattttgt ccactgattt catcgaagga 900
gatttcgttg atgcctgtgt cggccttact cacgcaagaa tcgaaggaaa ggtttgta 957

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<210> 2614

<211> 318

<212> PRF

<213> Arabidopsis thaliana

&lt;400&gt; 2614

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Met Leu Ser Phe Phe Ser Asn Gln Ile Asp Arg Gln Lys Asp Val Ser
1      5      10      15
Asn Glu Glu Lys Thr Leu Thr Asn Leu Glu Lys Ser Asp Gly Ser Gln
20      25      30
Phe Pro Gly Asp Asp Tyr Arg Pro Ser Asp Arg Lys Asn Trp Met Ala
35      40      45
Gly Leu Thr Leu Glu Lys Leu Thr Leu Asn Lys Ile Val Trp Pro Gly
50      55      60
Thr His Asp Ser Ala Thr Asn Asp Ile Gly Ile Pro Leu Ile Ser Arg
65      70      75      80
Pro Leu Ala Glu Cys Gln Ser Leu Ser Ile Tyr Glu Gln Leu Val Leu
85      90      95
Gly Thr Arg Val Leu Asp Ile Arg Val Gln Glu Asp Arg Gln Ile Cys
100     105     110
His Gly Ile Leu Thr Ser Tyr Glu Ile Asp Val Val Ile Asp Asp Val
115     120     125
Ile Arg Phe Leu Ser Glu Thr His Ser Glu Ile Val Ile Leu Glu Ile
130     135     140
Arg Thr Glu Phe Gly His Lys Asp Pro Pro Gly Phe Glu Thr Tyr Leu
145     150     155     160
Ala Asp Lys Leu Gly Gln Phe Leu Ile His Gln Asp Asp Ser Leu Phe
165     170     175
Asn Lys Pro Val Ser Glu Ile Leu Pro Lys Arg Val Ile Cys Ile Trp
180     185     190
Lys Pro Arg Glu Ser Pro Lys Pro Ser Arg Gly Gly Ile Leu Trp Asn
195     200     205
Ser Asp Tyr Leu Lys Asp Asn Trp Ile Asp Thr Asp Leu Pro Trp Thr
210     215     220
Lys Phe Gln Ser Asn Leu Lys His Leu Ser Glu Gln Gln Pro Thr Ser
225     230     235     240

```

Ser Arg Lys Phe Phe Tyr Arg Val Glu Asn Thr Val Thr Pro Gln Ala  
 245 250 255

Asp Asn Pro Val Val Trp Val Lys Pro Val Thr Asp Arg Ile Arg Lys  
 260 265 270

His Ala Arg Leu Phe Ile Ser Gln Cys Val Ser Lys Gly Cys Gly Asp  
 275 280 285

Lys Leu Gln Ile Leu Ser Thr Asp Phe Ile Glu Gly Asp Phe Val Asp  
 290 295 300

Ala Cys Val Gly Leu Thr His Ala Arg Ile Glu Gly Lys Val  
 305 310 315

<210> 2615

<211> 1380

<212> DNA

<213> Arabidopsis thaliana

<400> 2615  
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 tccgtcgccg tcttctctgt ttcttacgtc ggagacacaa caaaccttat tcatcatcat 120  
 ctctcttctc tctctgccac cgaaaaaatt tggccggatt tgaagtttag ctggaaactt 180  
 gtgttggtta cagtgatagc gtttctagga tcagcttggt ggactgttgg tgggtttgga 240  
 ggtggtggga tttttgttcc tatgctcact cttatactcg ggttcgatac aaaatccgca 300  
 gctgcaatat caaaatgtat gataatggga gcatcagcat catcagtttg gtacaatgta 360  
 cgagtctcgc atccgacaaa agaagtacca atcttagatt atgatcttgc tcttctcttt 420  
 caaccaatgc ttcttctcgg tatcactggt ggtgtttctc tcagtgttgt gtcccttat 480  
 tggctcatta ctgtctcat catcattctt ttcgtcggtta cttcttcgag atcttttttt 540  
 aaaggcattg agatgtggaa ggaagagaca ttgttaaaga acgaaatggc gcagcaacga 600  
 gctaatatgg ttaattcccg gggagaactt ttaatcgata cagagtatga gccgctttac 660  
 ccgagagaag aaaaatcaga gctggaaata atacgtccca acctcaaatg gaaagggtct 720  
 ctaattctag taactgtgtg gttgactttc ttgctcattc aaattgtcaa gaacgaaata 780  
 aaggctctga gcacaatata ttggatacta ttcacgttac agtcccaggt tgcttagcgt 840  
 gtgtttgggt ttgaagcaag caaattgtat acagcgaaca aaaagaggtt aaacagtggc 900  
 aacactgaat gtatctgtga agctacgatt gagggtgactc ctctgagtct aatcttctgt 960

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ggctctctgtg gtctcattgg aggtatcgta ggtggtctcc ttggatccgg tggtaggattt 1020
gttctcgggc ctttgccttct tgagattgga gtcatccac aggttgctag cgcaacagct 1080
acctttgtga tgatgttttc ttcgtcctta tccgtagtcg agttctatct cctcaagaga 1140
ttcccaatac catacgcaat gtacttgatt tcggtatcga ttcttgccgg tttttgggga 1200
caatccttta taagaaagct cgtggcgatc ctgagaagag cttccataat cgttttcggt 1260
ctctcaggag tcatttgtgc aagtgccttc acaatgggag tgattgggat agagaagagc 1320
ataaagatga tacataacca tgaattcatg ggattccttag gattctgcag cagtcaatga 1380

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&lt;210&gt; 2616

&lt;211&gt; 459

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2616

```

Met Gly Leu Trp Asn Gly Lys Gly Thr Gly Gly Phe Ile Leu Tyr Leu
1      5      10      15

```

```

Leu Val Ala Phe Ser Val Ala Val Phe Ser Val Ser Tyr Val Gly Asp
20      25      30

```

```

Thr Thr Asn Pro Ile His His His Leu Ser Ser Leu Ser Ala Thr Glu
35      40      45

```

```

Lys Ile Trp Pro Asp Leu Lys Phe Ser Trp Lys Leu Val Leu Ala Thr
50      55      60

```

```

Val Ile Ala Phe Leu Gly Ser Ala Cys Gly Thr Val Gly Gly Val Gly
65      70      75      80

```

```

Gly Gly Gly Ile Phe Val Pro Met Leu Thr Leu Ile Leu Gly Phe Asp
85      90      95

```

```

Thr Lys Ser Ala Ala Ala Ile Ser Lys Cys Met Ile Met Gly Ala Ser
100     105     110

```

```

Ala Ser Ser Val Trp Tyr Asn Val Arg Val Arg His Pro Thr Lys Glu
115     120

```

```

Val Pro Ile Leu Asp Tyr Asp Leu Ala Leu Leu Phe Gln Pro Met Leu
130     135     140

```

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Leu Leu Gly Ile Thr Val Gly Val Ser Leu Ser Val Val Phe Pro Tyr  
 145 150 155 160  
 Trp Leu Ile Thr Val Leu Ile Ile Ile Leu Phe Val Gly Thr Ser Ser  
 165 170 175  
 Arg Ser Phe Phe Lys Gly Ile Glu Met Trp Lys Glu Glu Thr Leu Leu  
 180 185 190  
 Lys Asn Glu Met Ala Gln Gln Arg Ala Asn Met Val Asn Ser Arg Gly  
 195 200 205  
 Glu Leu Leu Ile Asp Thr Glu Tyr Glu Pro Leu Tyr Pro Arg Glu Glu  
 210 215 220  
 Lys Ser Glu Leu Glu Ile Ile Arg Ser Asn Leu Lys Trp Lys Gly Leu  
 225 230 235 240  
 Leu Ile Leu Val Thr Val Trp Leu Thr Phe Leu Leu Ile Gln Ile Val  
 245 250 255  
 Lys Asn Glu Ile Lys Val Cys Ser Thr Ile Tyr Trp Ile Leu Phe Ile  
 260 265 270  
 Val Gln Phe Pro Val Ala Leu Ala Val Phe Gly Phe Glu Ala Ser Lys  
 275 280 285  
 Leu Tyr Thr Ala Asn Lys Lys Arg Leu Asn Ser Gly Asn Thr Glu Cys  
 290 295 300  
 Ile Cys Glu Ala Thr Ile Glu Trp Thr Pro Leu Ser Leu Ile Phe Cys  
 305 310 315  
 Gly Leu Cys Gly Leu Ile Gly Gly Ile Val Gly Gly Leu Leu Gly Ser  
 325 330 335  
 Gly Gly Gly Phe Val Leu Gly Pro Leu Leu Glu Ile Gly Val Ile  
 340 345 350  
 Pro Gln Val Ala Ser Ala Thr Ala Thr Phe Val Met Met Phe Ser Ser  
 355 360 365  
 Ser Leu Ser Val Val Glu Phe Tyr Leu Leu Lys Arg Phe Pro Ile Pro  
 370 375 380  
 Tyr Ala Met Tyr Leu Ile Ser Val Ser Ile Leu Ala Gly Phe Trp Gly  
 385 390 395 400

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Gln Ser Phe Ile Arg Lys Leu Val Ala Ile Leu Arg Arg Ala Ser Ile  
405 410 415

Ile Val Phe Val Leu Ser Gly Val Ile Cys Ala Ser Ala Leu Thr Met  
420 425 430

Gly Val Ile Gly Ile Glu Lys Ser Ile Lys Met Ile His Asn His Glu  
435 440 445

Phe Met Gly Phe Leu Gly Phe Cys Ser Ser Gln  
450 455

<210> 2617

<211> 501

<212> DNA

<213> Arabidopsis thaliana

<400> 2617  
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tgccgtgaga agacaaagga gtttctcaag gaagtttcta tgcctaattg tttattgcca 120  
ttgaaggaca ttgaagaagt tggttacgac agagagacag gtattgtctg gctgaagcag 180  
aagaagagca tcaccacaa gtttgaagcc attggtaaac ttgtctctta cgccaccgag 240  
gtcattgcac aggtggaggt cggaaagatc aagaagctta ccggtgttaa ggccaaggag 300  
cttcttattt gggtcactct caatgagctt gtcttggagc agccgacaag ttcagggaag 360  
atcaatttca ggacaccaac tggctgtgcc aggactttcc cagtgtctgc tttcgttgtt 420  
cctgaagttg agaagcctgc aacggagaag aacaatgaa cactgaggt caaagaagct 480  
gttcagtcga cagatgctta g 501

<210> 2618

<211> 166

<212> PRT

<213> Arabidopsis thaliana

<400> 2618

Met Gly Leu Val Thr Asp Glu Val Arg Ala Arg Ala Glu Lys Tyr Thr  
1 5 10 15

Gly Asp Glu Ile Cys Arg Glu Lys Thr Lys Glu Phe Leu Lys Glu Val  
 20 25 30

Ser Met Pro Asn Gly Leu Leu Pro Leu Lys Asp Ile Glu Glu Val Gly  
 35 40 45

Tyr Asp Arg Glu Thr Gly Ile Val Trp Leu Lys Gln Lys Lys Ser Ile  
 50 55 60

Thr His Lys Phe Glu Ala Ile Gly Lys Leu Val Ser Tyr Ala Thr Glu  
 65 70 75 80

Val Ile Ala Gln Val Glu Val Gly Lys Ile Lys Lys Leu Thr Gly Val  
 85 90 95

Lys Ala Lys Glu Leu Leu Ile Trp Val Thr Leu Asn Glu Leu Val Leu  
 100 105 110

Glu Gln Pro Thr Ser Ser Gly Lys Ile Asn Phe Arg Thr Pro Thr Gly  
 115 120 125

Leu Ser Arg Thr Phe Pro Val Ser Ala Phe Val Val Pro Glu Val Glu  
 130 135 140

Lys Pro Ala Thr Glu Lys Asn Asn Gly Thr Thr Glu Val Lys Glu Ala  
 145 150 155 160

Val Ala Val Thr Asp Ala  
 165

<210> 2619

<211> 1341

<212> DNA

<213> Arabidopsis thaliana

<400> 2619  
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 ccaactccaa ataattccca aactctccaa ctctcaattt acgatcacat ccttctcca 120  
 gtttacacag tagcctttct ctctacacc aaaaatgatt tgatctctca agaacacact 180  
 tcccacaaac tcaagacttc tctgtctgaa accctgacca agttctaccc tcttgccgga 240  
 agaatcaccg gagtaaccgt cgattgtacc gatgaaggag ctatctttgt cgatgctcgt 300  
 gtcaataact gtcctctcac tgaatttctc aagtgccttg atttcgacgc cctccaacag 360

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ttgcttcctc tagatgttgt agacaaccca tacgtggctg ctgccacgtg gcctttgctg 420
ctcgtgaagg caacttactt cggatgcgga ggcattggcca taggaatctg catcactcac 480
aaaatcgcgg acgcagcctc catctcgact ttcatctcggg cctggggccgc cacggctcga 540
ggagagaacg atgccgctgc gatggaaagt cctgtatttg ctggtgcgaa tttctaccca 600
ccagccaatg aggcttttaa gctacctgcg gacgaacaag ccggcaagag aagcagcatt 660
acaaagagat ttgtgttcga agcttctaag gtggaagatc tcaggaccaa agccgctagt 720
gaagaacacg tagaccaacc tacgcgggtg gagagcggtta ctgcgctcat ctggaatgc 780
ttcgtcgcat cctcaaagac aactacttgt gatcacaaag tgctgggtcca gcttgctaac 840
ttcgggtcca agataccttc ctttctgcaa gaaagctcta tcggaatct catgttctct 900
ctcgtggtct tgagtatttg tcgaggaggg gaagttaaaa ttgaagaggc cgtagagac 960
ttacgaaaaa aaaaggagga gttaggaaact gtgacccatg acgagggtgg gtcactcgac 1020
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agctatgaga ctcatgaacc ctataccgtg agtagctggt gtaagctacc tctttacgag 1140
gctagctttg gatgggattc tccggtttgg gttgttgga atgtgtcccc cgtgttaggc 1200
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cctgaagaga acatgtcgtc cttcgagcag aaccagagt tgctgcgctt tgctaccatg 1320
aacctagtg tcttggttta a 1341

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&lt;210&gt; 2620

&lt;211&gt; 446

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2620

Met Glu Thr Met Thr Met Lys Val Glu Thr Ile Ser Lys Glu Ile Ile  
1 5 10 15

Lys Pro Ser Ser Pro Thr Pro Asn Asn Leu Gln Thr Leu Gln Leu Ser  
20 25 30

Ile Tyr Asp His Ile Leu Pro Pro Val Tyr Thr Val Ala Phe Leu Phe  
35 40 45

Tyr Thr Lys Asn Asp Leu Ile Ser Gln Glu His Thr Ser His Lys Leu  
50 55 60



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Lys Thr Ser Leu Ser Glu Thr Leu Thr Lys Phe Tyr Pro Leu Ala Gly  
 65 70 75 80  
 Arg Ile Thr Gly Val Thr Val Asp Cys Thr Asp Glu Gly Ala Ile Phe  
 85 90 95  
 Val Asp Ala Arg Val Asn Asn Cys Pro Leu Thr Glu Phe Leu Lys Cys  
 100 105 110  
 Pro Asp Phe Asp Ala Leu Gln Gln Leu Leu Pro Leu Asp Val Val Asp  
 115 120 125  
 Asn Pro Tyr Val Ala Ala Ala Thr Trp Pro Leu Leu Leu Val Lys Ala  
 130 135 140  
 Thr Tyr Phe Gly Cys Gly Gly Met Ala Ile Gly Ile Cys Ile Thr His  
 145 150 155 160  
 Lys Ile Ala Asp Ala Ala Ser Ile Ser Thr Phe Ile Arg Ser Trp Ala  
 165 170 175  
 Ala Thr Ala Arg Gly Glu Asn Asp Ala Ala Ala Met Glu Ser Pro Val  
 180 185 190  
 Phe Ala Gly Ala Asn Phe Tyr Pro Pro Ala Asn Glu Ala Phe Lys Leu  
 195 200 205  
 Pro Ala Asp Glu Gln Ala Gly Lys Arg Ser Ser Ile Thr Lys Arg Phe  
 210 215 220  
 Val Phe Glu Ala Ser Lys Val Glu Asp Leu Arg Thr Lys Ala Ala Ser  
 225 230 235 240  
 Glu Glu Thr Val Asp Gln Pro Thr Arg Val Glu Ser Val Thr Ala Leu  
 245 250 255  
 Ile Trp Lys Cys Phe Val Ala Ser Ser Lys Thr Thr Thr Cys Asp His  
 260 265 270  
 Lys Val Leu Val Gln Leu Ala Asn Leu Arg Ser Lys Ile Pro Ser Leu  
 275 280 285  
 Leu Gln Glu Ser Ser Ile Gly Asn Leu Met Phe Ser Ser Val Val Leu  
 290 295 300  
 Ser Ile Gly Arg Gly Gly Glu Val Lys Ile Glu Glu Ala Val Arg Asp  
 305 310 315 320

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Leu Arg Lys Lys Lys Glu Glu Leu Gly Thr Val Ile Leu Asp Glu Gly  
325 330 335

Gly Ser Ser Asp Ser Ser Ser Met Ile Gly Ser Lys Leu Ala Asn Leu  
340 345 350

Met Leu Thr Asn Tyr Ser Arg Leu Ser Tyr Glu Thr His Glu Pro Tyr  
355 360 365

Thr Val Ser Ser Trp Cys Lys Leu Pro Leu Tyr Glu Ala Ser Phe Gly  
370 375 380

Trp Asp Ser Pro Val Trp Val Val Gly Asn Val Ser Pro Val Leu Gly  
385 390 395 400

Asn Leu Ala Met Leu Ile Asp Ser Lys Asp Gly Gln Gly Ile Glu Ala  
405 410 415

Phe Val Thr Leu Pro Glu Glu Asn Met Ser Ser Phe Glu Gln Asn Pro  
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Glu Leu Leu Ala Phe Ala Thr Met Asn Pro Ser Val Leu Val  
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<213> Arabidopsis thaliana

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gagaagcaga agaagaggtta tcctggagaa tcaaaggggt ttgtggagga gatgaggttt 240  
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acttatgccg agttcaagaa cacggggctg gaaagagcgg agaaattatc cacggatttg 480  
gagtggttca aggaacaagg ttacgagatt ccagaaccaa cagctcctgg taaaacatat 540  
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<211> 282

<212> PRT

<213> Arabidopsis thaliana

<400> 2622

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Phe Leu	Arg	Pro	Arg	Ile	Gln	Ile	Leu	Ser	Met	Thr	Met	Asn	Lys	Ser
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Pro Ser	Leu	Val	Val	Val	Ala	Ala	Thr	Thr	Ala	Ala	Glu	Lys	Gln	Lys
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Lys Arg Tyr Pro Gly	Glu	Ser	Lys	Gly	Phe	Val	Glu	Glu	Met	Arg	Phe
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Val Ala Met Arg	Leu	His	Thr	Lys	Asp	Gln	Ala	Lys	Glu	Gly	Glu	Lys
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Glu Thr Lys Ser	Ile	Glu	Glu	Arg	Pro	Val	Ala	Lys	Trp	Glu	Pro	Thr
	100				105					110		

Val Glu Gly	Tyr	Leu	Arg	Phe	Leu	Val	Asp	Ser	Lys	Leu	Val	Tyr	Asp
	115				120					125			

Thr Leu Glu	Leu	Ile	Ile	Gln	Asp	Ser	Asn	Phe	Pro	Thr	Tyr	Ala	Glu
	130			135					140				

Phe Lys Asn Thr Gly	Leu	Glu	Arg	Ala	Glu	Lys	Leu	Ser	Thr	Asp	Leu
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Glu Trp Phe Lys Glu Gln Gly Tyr Glu Ile Pro Glu Pro Thr Ala Pro  
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Gly Lys Thr Tyr Ser Gln Tyr Leu Lys Glu Leu Ala Glu Lys Asp Pro  
180 185 190

Gln Ala Phe Ile Cys His Phe Tyr Asn Ile Tyr Phe Ala His Ser Ala  
195 200 205

Gly Gly Arg Met Ile Gly Arg Lys Val Ala Glu Arg Ile Leu Asp Asn  
210 215 220

Lys Glu Leu Glu Phe Tyr Lys Trp Asp Gly Glu Leu Ser Gln Leu Leu  
225 230 235 240

Gln Asn Val Arg Glu Lys Leu Asn Lys Val Ala Glu Glu Trp Thr Arg  
245 250 255

Glu Glu Lys Asn His Cys Leu Glu Glu Thr Glu Lys Ser Phe Lys Tyr  
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<211> 1521

<212> DNA

<213> Arabidopsis thaliana

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Page 3670

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&lt;210&gt; 2624

&lt;211&gt; 506

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2624

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Thr Ser Tyr Ser Asp Ala Phe Thr Arg Asn Ser Phe Pro Lys Asp Phe  
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Leu Phe Gly Ala Ala Thr Ser Ala Tyr Gln Trp Glu Gly Ala Val Ala  
35 40 45

Glu Asp Gly Arg Thr Pro Ser Val Trp Asp Thr Phe Ser Asn Ser Tyr  
50 55 60

Asp Thr Gly Asn Gly Asp Val Thr Ser Asp Gly Tyr His Lys Tyr Lys  
Page 3671

65                      70                      75                      80  
 Glu Asp Val Lys Leu Met Ala Thr Met Gly Leu Glu Ser Phe Arg Phe  
                                  85                                   90                                   95  
 Ser Ile Ser Trp Ser Arg Leu Ile Pro Asn Gly Arg Gly Leu Ile Asn  
                                  100                                   105                                   110  
 Pro Lys Gly Leu Leu Phe Tyr Asn Asn Leu Ile Lys Asp Leu Lys Ser  
                                  115                                   120                                   125  
 His Gly Ile Glu Pro His Val Thr Leu Tyr His Tyr Asp Leu Pro Gln  
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 Ser Leu Glu Asp Glu Tyr Gly Gly Trp Ile Asn Arg Lys Ile Ile Glu  
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 Asp Phe Thr Ala Tyr Ala Asp Val Cys Phe Arg Glu Phe Gly Glu Asp  
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 Val Lys Leu Trp Thr Thr Ile Asn Glu Ala Thr Ile Phe Ala Ile Gly  
                                  180                                   185                                   190  
 Ser Tyr Asp Gln Gly Thr Ala Pro Pro Gly His Cys Ser Pro Asn Lys  
                                  195                                   200                                   205  
 Phe Val Asn Cys Ser Thr Gly Asn Ser Ser Thr Glu Pro Tyr Ile Ala  
                                  210                                   215                                   220  
 Gly His Asn Ile Leu Leu Ala His Ala Ser Ala Ser Lys Leu Tyr Lys  
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 Leu Lys Tyr Lys Ser Lys Gln Lys Gly Ser Ile Gly Leu Ser Ile Phe  
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 Ala Phe Gly Leu Ser Pro Tyr Thr Asn Ser Lys Asp Asp Glu Ile Ala  
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 Thr Gln Arg Ala Lys Thr Phe Leu Tyr Gly Trp Met Leu Lys Pro Leu  
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 Val Phe Gly Asp Tyr Pro Asp Glu Met Lys Lys Thr Val Gly Ser Arg  
                                  290                                   295  
 Leu Pro Val Phe Ser Glu Glu Glu Ser Glu Gln Val Lys Gly Ser Ser  
                                  305                                   310                                   315                                   320

Asp Phe Ile Gly Ile Ile His Tyr Thr Thr Phe Tyr Val Thr Asn His  
 325 330 335

Gln Pro Ser Ala Ser Leu Phe Pro Ser Met Gly Glu Gly Phe Phe Lys  
 340 345 350

Asp Met Gly Val Tyr Ile Ile Pro Thr Gly Asn Ser Ser Phe Leu Val  
 355 360 365

Trp Glu Ala Thr Pro Trp Gly Leu Glu Gly Ile Leu Glu Tyr Ile Lys  
 370 375 380

Gln Ser Tyr Asn Asn Pro Pro Val Tyr Ile Leu Glu Asn Gly Met Pro  
 385 390 395 400

Met Val Arg Asp Ser Thr Leu Gln Asp Thr Gln Arg Ile Glu Tyr Ile  
 405 410 415

Gln Ala Tyr Ile Asp Ala Val Leu Asn Ala Met Lys Asn Gly Ser Asp  
 420 425 430

Thr Arg Gly Tyr Phe Val Trp Ser Met Val Asp Val Tyr Glu Ile Leu  
 435 440 445

Ser Gly Tyr Thr Thr Ser Phe Gly Met Tyr His Val Asn Phe Ser Asp  
 450 455 460

Pro Gly Arg Lys Arg Thr Pro Lys Leu Ser Ala Ser Trp Tyr Thr Gly  
 465 470 475 480

Phe Leu Asn Gly Thr Ile Asp Val Ala Ser Gln Asp Thr Ile Gln Leu  
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<213> Arabidopsis thaliana

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&lt;210&gt; 2626

&lt;211&gt; 306

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2626

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Met Glu Val Pro Val Ile Asn Arg Ile Arg Asp Phe Glu Val Gly Ile
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Asn Ser Ile Asn Asp Pro Ser Phe Leu Ser Arg Ser Val Ala Val Ser
20          25          30

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Gly Ile Gly Lys Leu His Gln Ala Tyr Gly Phe Trp Lys Trp Gly Ala
35          40          45

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Leu Ile Ile Ala Phe Leu Ala Tyr Phe Thr Asn Phe Val Ser Lys Leu
50          55          60

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Asn Ser Leu Val Val Arg Leu Arg Lys Ile Asp Val Ser Val Ser Ser
65          70          75          80

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Pro Thr Leu Phe Asp Asp Tyr Asp Ser Asp Ser Asp Val Ser Cys Ser
85          90          95

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Ser Thr Val Ser Ser Asp Asp Glu Lys Asp Glu Glu Asp Glu Ala Asp  
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Asp Glu Asp Glu Asp Val Asp Ser Ile Phe Asn Arg Arg Arg Val Asn  
115 120 125

Gly Gly Phe Arg Val Arg Gly Ser Asp Tyr Tyr Asp Asp Asp Asp Asp  
130 135 140

Gln Gly Asp Asn Gly Asn Cys Thr Trp Met Gly Arg Arg Tyr Ser Gly  
145 150 155 160

Ser Phe Gly Asp Leu Phe Ser Trp Pro Asp Leu Gly Gly Ile Gly Ser  
165 170 175

Ser Gly Val Val Lys Leu Trp Asp His Leu Asp Ile Asp Gly Asp Asp  
180 185 190

His Glu Asn Val Val Ala Thr Phe Leu Lys Asn Tyr Asn Ser Thr Ser  
195 200 205

Ser Pro Phe Phe Trp Ala Ala Glu Lys Lys Gly Val Asp Ala Val Lys  
210 215 220

Val Lys Ala Cys Asp Pro Arg Ala Gly Phe Arg Met Pro Ala Leu Leu  
225 230 235 240

Ala Glu Trp Arg Gln Pro Gly Arg Leu Leu Gly Asn Ile Ile Gly Val  
245 250 255

Asp Thr Gly Gly Val Glu Lys Val Tyr Val Arg Asp Asp Val Ser Gly  
260 265 270

Glu Ile Ala Val Gly Asp Leu Arg Lys Phe Asn Gly Val Leu Thr Asp  
275 280 285

Leu Thr Glu Cys Glu Ala Glu Thr Trp Trp Asp Ala Asp Val Leu Ile  
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Ser Gly  
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<211> 531

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&lt;211&gt; 176

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

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 20 25 30

Ser Asn Met Asp Leu Cys Ser Lys Cys Tyr Arg Gly Ile Cys Ala Glu  
 35 40 45

Glu Ala Gln Thr Ala Val Ala Lys Ala Ala Val Glu Lys Ser Phe Lys  
 50 55 60

Pro Ser Pro Pro Arg Ser Leu Phe Ile Ala Glu Pro Pro Ala Val Val  
 65 70 75 80

Val Glu Pro Lys Pro Glu Lys Ala Ala Val Val Val Val Ser Ala Glu  
 85 90 95

Pro Ser Ser Ser Ala Val Pro Glu Ala Asn Glu Pro Ser Arg Pro Ala  
 100 105 110

Arg Thr Asn Arg Cys Leu Cys Cys Asn Lys Lys Val Gly Ile Met Gly  
 115 120 125

Phe Lys Cys Lys Cys Gly Ser Thr Phe Cys Gly Glu His Arg Tyr Pro  
 130 135 140

Glu Thr His Asp Cys Ser Phe Asp Phe Lys Glu Val Gly Arg Gly Glu  
 145 150 155 160

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<211> 3207

<212> DNA

<213> Arabidopsis thaliana

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<211> 1068

<212> PRT

<213> Arabidopsis thaliana

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35 40 45

Asp Asp Ala Leu Gly Asp Ser Met Asp Ser Gly Phe Tyr Ser Phe Arg  
50 55 60

Leu Ile Leu Gly Glu Asp Gly Phe Asn Leu Met Leu Thr Arg Arg Val  
65 70 75 80

Arg Phe Leu Ile Gln Tyr Glu Thr Ile Met Phe Ile Asn Ala Gly Gly  
85 90 95

Asp Asp Ser Lys Val Leu Asp Ser Glu Leu Asn Ile Ser Arg Asp Asp  
100 105 110

Tyr Phe Glu Gly Gly Asp Val Leu Arg Thr Glu Glu Ser Ile Val Glu  
115 120 125

Ala Gly Asp Phe Pro Phe Ile Tyr Gln Ser Ala Arg Val Gly Asn Phe  
130 135 140

Cys Tyr Gln Leu Asn Asn Leu Leu Pro Gly Glu Tyr Leu Ile Asp Phe  
145 150 155 160

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His Phe Ala Glu Ile Ile Asn Thr Asn Gly Pro Lys Gly Ile Arg Val  
165 170 175

Phe Asn Val Tyr Val Gln Asp Glu Lys Ala Thr Glu Phe Asp Ile Phe  
180 185 190

Ser Val Val Gly Ala Asn Arg Pro Leu Leu Leu Val Asp Leu Arg Val  
195 200 205

Met Val Met Asp Asp Gly Leu Ile Arg Val Arg Phe Glu Gly Ile Asn  
210 215 220

Gly Ser Pro Val Val Cys Gly Ile Cys Leu Arg Lys Ala Pro Gln Val  
225 230 235

Ser Val Pro Arg Thr Ser Gln Asp Phe Ile Lys Cys Glu Asn Cys Ala  
245 250 255

Thr Glu Ile Glu Ile Ser Pro Thr Arg Lys Arg Leu Met Arg Ala Lys  
260 265 270

Ala His Asp Lys Tyr Glu Lys Lys Ile Ala Glu Leu Ser Glu Arg Tyr  
275 280 285

Glu His Lys Thr Asn Glu Cys His Glu Ala Trp Met Ser Leu Thr Ser  
290 295 300

Ala Asn Glu Gln Leu Glu Lys Val Met Met Glu Leu Asn Asn Lys Ile  
305 310 315 320

Tyr Gln Ala Arg Ser Leu Asp Gln Thr Val Ile Thr Gln Ala Asp Cys  
325 330 335

Leu Lys Ser Ile Thr Arg Lys Tyr Glu Asn Asp Lys Arg His Trp Ala  
340 345 350

Thr Ala Ile Asp Ser Leu Gln Glu Lys Ile Glu Ile Met Lys Arg Glu  
355 360 365

Gln Ser Gln Leu Ser Gln Glu Ala His Glu Cys Val Glu Gly Ile Pro  
370 375 380

Glu Leu Tyr Lys Met Val Gly Gly Val Gln Ala Leu Val Ser Gln Cys  
385 390 395 400

Glu Asp Leu Lys Gln Lys Tyr Ser Glu Glu Gln Ala Lys Arg Lys Glu  
405 410 415

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Leu Tyr Asn His Ile Gln Glu Thr Lys Gly Asn Ile Arg Val Phe Cys  
 420 425 430  
 Arg Cys Arg Pro Leu Asn Thr Glu Glu Thr Ser Thr Lys Ser Ala Thr  
 435 440 445  
 Ile Val Asp Phe Asp Gly Ala Lys Asp Gly Glu Leu Gly Val Ile Thr  
 450 455 460  
 Gly Asn Asn Ser Lys Lys Ser Phe Lys Phe Asp Arg Val Tyr Thr Pro  
 465 470 475 480  
 Lys Asp Gly Gln Val Asp Val Phe Ala Asp Ala Ser Pro Met Val Val  
 485 490 495  
 Ser Val Leu Asp Gly Tyr Asn Val Cys Ile Phe Ala Tyr Gly Gln Thr  
 500 505 510  
 Gly Thr Gly Lys Thr Phe Thr Met Glu Gly Thr Pro Gln Asn Arg Gly  
 515 520 525  
 Val Asn Tyr Arg Thr Val Glu Gln Leu Phe Glu Val Ala Arg Glu Arg  
 530 535 540  
 Arg Glu Thr Ile Ser Tyr Asn Ile Ser Val Ser Val Leu Glu Val Tyr  
 545 550 555 560  
 Asn Glu Gln Ile Arg Asp Leu Leu Ala Thr Ser Pro Gly Ser Lys Lys  
 565 570 575  
 Leu Glu Ile Lys Gln Ser Ser Asp Gly Ser His His Val Pro Gly Leu  
 580 585 590  
 Val Glu Ala Asn Val Glu Asn Ile Asn Glu Val Trp Asn Val Leu Gln  
 595 600 605  
 Ala Gly Ser Asn Ala Arg Ser Val Gly Ser Asn Asn Val Asn Glu His  
 610 615 620  
 Ser Ser Arg Ser His Cys Met Leu Ser Ile Met Val Lys Ala Lys Asn  
 625 630 635 640  
 Leu Met Asn Gly Asp Cys Thr Lys Ser Lys Leu Trp Leu Val Asp Leu  
 645 650 655  
 Ala Gly Ser Glu Arg Leu Ala Lys Thr Asp Val Gln Gly Glu Arg Leu

Lys Glu Ala Gln Asn Ile Asn Arg Ser Leu Ser Ala Leu Gly Asp Val  
 675 680  
 Ile Tyr Ala Leu Ala Thr Lys Ser Ser His Ile Pro Tyr Ser Pro Ser  
 690 695  
 Glu His Asp Val Ser Glu Thr Leu Ser Ser Leu Asn Phe Ala Thr Arg  
 705 710 715 720  
 Val Arg Gly Val Glu Leu Gly Pro Ala Arg Lys Gln Val Asp Thr Gly  
 725 730 735  
 Glu Ile Gln Lys Leu Lys Ala Met Val Glu Lys Ala Arg Gln Glu Ser  
 740 745  
 Arg Ser Lys Asp Glu Ser Ile Lys Lys Met Glu Glu Asn Ile Gln Asn  
 755 760 765  
 Leu Glu Gly Lys Asn Lys Gly Arg Asp Asn Ser Tyr Arg Ser Leu Gln  
 770 775 780  
 Glu Lys Asn Lys Asp Leu Gln Asn Gln Leu Asp Ser Val His Asn Gln  
 785 790 795 800  
 Ser Glu Lys Gln Tyr Ala Gln Leu Gln Glu Arg Leu Lys Ser Arg Asp  
 805 810 815  
 Glu Ile Cys Ser Asn Leu Gln Gln Lys Val Lys Glu Leu Glu Cys Lys  
 820 825 830  
 Leu Arg Glu Arg His Gln Ser Asp Ser Ala Ala Asn Asn Gln Lys Val  
 835 840 845  
 Lys Asp Leu Glu Asn Asn Leu Lys Glu Ser Glu Gly Ser Ser Leu Val  
 850 855 860  
 Trp Gln Gln Lys Val Lys Asp Tyr Glu Asn Lys Leu Lys Glu Ser Glu  
 865 870 875 880  
 Gly Asn Ser Leu Val Trp Gln Gln Lys Ile Lys Glu Leu Glu Ile Lys  
 885 890 895  
 His Lys Asp Glu Gln Ser Gln Glu Ala Val Leu Leu Arg Gln Lys Ile  
 900 905 910



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Lys Glu Leu Glu Met Arg Leu Lys Glu Gln Glu Lys His Ile Gln Glu  
915 920 925

Met Ala Thr Thr Arg Glu Phe Pro Glu Val Ala Asn Ala Thr Pro Asn  
930 935 940

Glu Val Lys Thr Cys Phe Lys Glu Asp Asn Phe Gly Asn Glu Asn Met  
945 950 955 960

Glu Ser Asn Thr Asn Ile Leu Arg Thr Ser Asn Arg Leu Lys Thr Lys  
965 970 975

Arg His Asp Ser Leu Asn Leu Asn Glu Met Thr Arg Lys Lys Arg Ala  
980 985 990

Ser Arg Ser Gly Glu Thr Glu Asn Asn Gly Asp Asp Pro Gln Met Lys  
995 1000 1005

Glu Lys Arg Ile Arg Lys Ser Asp Pro Pro Lys Val Phe Ser Arg  
1010 1015 1020

Val Val Arg Pro Thr Arg Thr Ala Ser Gly Ser Ser Ser Gln Val  
1025 1030 1035

Pro Val Ala Gln Lys Arg Val Ile Lys Arg Glu Gln Gln Glu Val  
1040 1045 1050

Pro Val Val Lys Glu Arg Asp Ser Lys Lys Lys Ile Trp Ser Arg  
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<210> 2631

<211> 1836

<212> DNA

<213> Arabidopsis thaliana

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gttgacttca gccaggagca aggatcggag tcaaatgaag ctattgacac tgagaatggt 180  
tcaagatccg tagacaagaa ccaatactct gaaactgaag ttgtagttag agcaaaagat 240  
ttacagacag aacctgattc actggatgat gatgtggaga ttgtgatcaa aaaccaacat 300  
aagtattaca tatactgcc ttgctgtggt gaagatatca ccaaacagat caagctcg 360

aagatatcag	atcccaaaaca	cacaaaagac	catgacaaag	ctgttgacag	tgacactgag	420
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cagccctgt	tttcttctga	agacagagga	aagaaagggg	ttgttgattc	agagttacta	540
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caattaccat	ctatgcctac	attgaggatg	ccttctgctt	ctgtactttt	gttactttcc	780
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cacaaggaga	aaggcgaggt	cgttcccaag	tctactgatt	ccaagtctca	cgatgaccaa	900
gctgcaaata	ctgatcaaga	ttttgacaag	aaaacagaca	acaaaagaaa	tcgcctaact	960
cctatatacc	cttcacact	agagaacact	tccaagcaaa	ctgtcaataa	ggaaactcaa	1020
aatcacgata	aagaagctgc	agatcctgac	caagatgtag	acaaggaaac	agagaaccaa	1080
aaaagtcacc	taactccgat	atatccttca	ccactggagc	aaccttccaa	gcaaattatc	1140
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agtgtgaac	cacgcaaagg	cggtaataaa	gtagaaattc	tgaaaagtat	tgtgtatgga	1260
ggtcttacag	aatccatcac	aagcctatgc	acggtaacat	ctgcggcagc	tcttctgtct	1320
tcaactctga	acgttttagc	cttgggagtt	gccaatattg	caagcggtct	tcttctgact	1380
gttcacagcc	tccaagaact	aataaacgag	aaaccagaa	aacaaccaa	actgatgat	1440
tctccagaag	aaggagaagg	agaagaagat	cgatacgagg	aagtactcgg	gagaagagag	1500
tattcgagga	ttcacagagt	gatcgcaatc	tcttctttcg	tcattctcgg	attgatccca	1560
cctttagtat	acggtttctc	gtttcgaaaa	aagatggaaa	agagacaaga	gtacaagggt	1620
ttagctgttt	acgcagtgtc	tctactctgc	atcgctttgc	tctcaatagc	gaaagcttac	1680
gtgtcgaaaga	aacgcgatta	tgtaagact	ctgtttcgg	acacgacgac	ggcgacgacg	1740
gcgtcgggat	tctctcaatt	tgtgggatac	ttggtagatc	aatggcttga	gaaaagcggg	1800
ttttatgatg	attctccaga	aactcaacga	gtttga			1836

&lt;210&gt; 2632

&lt;211&gt; 611

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2632

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Met Asp Pro Thr Met Asn Pro Thr Pro Thr Pro Ser Ser Ala Gly Asn  
1 5 10 15

Ser Val Cys Thr Asp Glu Leu Thr Asn Leu Pro Pro Glu Asp Ser Pro  
20 25 30

Leu Asp Ser Glu Lys Asp Asp Ser Val Asp Phe Ser Gln Glu Gln Gly  
35 40 45

Ser Glu Ser Asn Glu Ala Ile Asp Thr Glu Asn Gly Ser Arg Ser Val  
50 55 60

Asp Lys Asn Gln Tyr Ser Glu Thr Glu Val Val Val Arg Ala Lys Asp  
65 70 75 80

Leu Gln Thr Glu Pro Asp Ser Leu Asp Asp Asp Val Glu Ile Val Ile  
85 90 95

Lys Asn Gln His Lys Tyr Tyr Ile Tyr Cys Pro Cys Cys Gly Glu Asp  
100 105 110

Ile Thr Lys Thr Val Lys Leu Val Lys Ile Ser Asp Pro Lys His Thr  
115 120 125

Lys Asp His Asp Lys Ala Val Asp Ser Asp Thr Glu Asn Gly Ser Lys  
130 135 140

Ser Lys Asp Lys Asn Thr Lys Val Pro Ser Trp Phe Ser Asp Phe Ile  
145 150 155 160

Gln Pro Leu Phe Ser Ser Glu Asp Arg Gly Lys Lys Gly Val Val Asp  
165 170 175

Ser Glu Leu Leu Gly Thr Tyr Glu Asp Leu Gly Ile Ile Gly Glu Glu  
180 185 190

Pro Ser Ile Asp Val Ser Asn Glu Lys Asp Arg Pro Ser Phe Pro Lys  
195 200 205

Trp Tyr Leu Asp Val Phe Ala Trp Leu Phe Leu Cys Ile Ile Ile Ala  
210 215 220

Leu Ser Val Leu Ser Thr Ser Pro Pro Pro Phe Ile Gln Pro His Leu  
225 230 235 240

Gln Leu Pro Ser Met Pro Thr Leu Arg Met Pro Ser Ala Ser Val Leu  
245 250 255

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Leu Leu Leu Pro Thr Ser Ala Val Leu Leu Leu Phe Ile Ile Ser Met  
 260 265 270  
 Arg Ser Arg Phe Thr Pro Arg Tyr His Lys Glu Lys Gly Glu Val Val  
 275 280 285  
 Pro Lys Ser Thr Asp Ser Lys Ser His Asp Asp Gln Ala Ala Asn Thr  
 290 295 300  
 Asp Gln Asp Phe Asp Lys Lys Thr Asp Asn Lys Arg Asn Arg Leu Thr  
 305 310 315  
 Pro Ile Tyr Pro Ser Ser Leu Glu Lys Pro Ser Lys Gln Thr Val Asn  
 325 330 335  
 Lys Glu Thr Gln Asn His Asp Lys Glu Ala Ala Asp Pro Asp Gln Asp  
 340 345 350  
 Val Asp Lys Glu Thr Glu Asn Gln Lys Ser His Leu Thr Pro Ile Tyr  
 355 360 365  
 Pro Ser Pro Leu Glu Gln Pro Ser Lys Gln Ile Ile Asn Lys Glu Thr  
 370 375 380  
 Gln Thr Glu Pro Met Leu Pro Pro Asn Ala Gln Ser Glu Ile Pro Asn  
 385 390 395 400  
 Ser Val Glu Pro Arg Lys Gly Gly Asn Lys Val Glu Ile Leu Lys Ser  
 405 410 415  
 Ile Val Tyr Gly Gly Leu Thr Glu Ser Ile Thr Ser Leu Cys Thr Val  
 420 425 430  
 Thr Ser Ala Ala Ala Ser Gly Ala Ser Thr Leu Asn Val Leu Ala Leu  
 435 440 445  
 Gly Val Ala Asn Leu Ser Ser Gly Leu Leu Leu Thr Val His Ser Leu  
 450 455 460  
 Gln Glu Leu Ile Asn Glu Lys Pro Arg Lys Gln Thr Asn Thr Asp Asp  
 465 470 475 480  
 Ser Pro Glu Glu Gly Glu Gly Glu Glu Asp Arg Tyr Glu Glu Val Leu  
 485 490 495  
 Gly Arg Arg Glu Tyr Ser Arg Ile His Arg Val Ile Ala Ile Ser Ser  
 500 505 510

Phe Val Ile Phe Gly Leu Ile Pro Pro Leu Val Tyr Gly Phe Ser Phe  
515 520 525

Arg Lys Lys Met Glu Lys Arg Gln Glu Tyr Lys Val Leu Ala Val Tyr  
530 535 540

Ala Val Ser Leu Leu Cys Ile Val Leu Leu Ser Ile Ala Lys Ala Tyr  
545 550 555 560

Val Ser Lys Lys Arg Asp Tyr Val Lys Thr Leu Phe Arg Tyr Thr Thr  
565 570 575

Thr Ala Thr Thr Ala Ser Gly Phe Ser Gln Phe Val Gly Tyr Leu Val  
580 585 590

Ser Gln Trp Leu Glu Lys Ser Gly Phe Tyr Asp Asp Ser Pro Glu Thr  
595 600 605

Gln Arg Val  
610

<210> 2633

<211> 747

<212> DNA

<213> Arabidopsis thaliana

<400> 2633

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agtgtctctc tccggcgtag cgccgtggtc gtgtcggcca ttaccggagc ttcttcggga	180
gctggaatag ggaagggtac agctgattcg ctgatacag tgaaagtctt ggatttgaga	240
ggaaatgaga ttccgatttc tgatttatgg aaagatagga aggccgttgt tgcatttgc	300
cgctattttg gatgtgtgct ctgtcggaaa cgagcagctt atcttgacaga aaagaaggat	360
gtgatggatg catctggtgt tgctcttggt ctgatcggac cgggaagcat cgatcaggct	420
aatacttttg tggaacagac taagtttaaa ggagagggtc atgcggatcc aaaccacgca	480
tcatacgagg cgcttgagtt cgtttcaggg gtttctgta catttacacc caaagctgct	540
atgaagatac tagagtccta catggaagga taccgccaag actggaaact ctcgtttatg	600
aaagatacag ttgaaagagg cggctggcaa caaggcggaa tcttagttgc tggccctggg	660

aaagataaca tctcttatat acgcaaggac aaagaagccg gtgatgaccc gcctgttgaa 720  
 gagatcctta aagcgtgttg tgcttga 747

<210> 2634

<211> 248

<212> PRT

<213> Arabidopsis thaliana

<400> 2634

Met Ala Ile Ala Leu Ser Ser Ser Ser Thr Ile Thr Ser Ile Thr Leu  
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Gln Pro Lys Leu Lys Thr Ile His Gly Leu Gly Thr Val Leu Pro Gly  
 20 25 30

Tyr Ser Val Lys Ser His Phe Arg Ser Val Ser Leu Arg Arg Ser Ala  
 35 40 45

Val Val Val Ser Ala Ile Thr Gly Ala Ser Ser Gly Ala Gly Ile Gly  
 50 55 60

Lys Gly Thr Ala Asp Ser Leu Asp Thr Val Lys Val Leu Asp Leu Arg  
 65 70 75 80

Gly Asn Glu Ile Pro Ile Ser Asp Leu Trp Lys Asp Arg Lys Ala Val  
 85 90 95

Val Ala Phe Ala Arg His Phe Gly Cys Val Leu Cys Arg Lys Arg Ala  
 100 105 110

Ala Tyr Leu Ala Glu Lys Lys Asp Val Met Asp Ala Ser Gly Val Ala  
 115 120 125

Leu Val Leu Ile Gly Pro Gly Ser Ile Asp Gln Ala Asn Thr Phe Val  
 130 135 140

Glu Gln Thr Lys Phe Lys Gly Glu Val Tyr Ala Asp Pro Asn His Ala  
 145 150 155 160

Ser Tyr Glu Ala Leu Glu Phe Val Ser Gly Val Ser Val Thr Phe Thr  
 165 170 175

Pro Lys Ala Ala Met Lys Ile Leu Glu Ser Tyr Met Glu Gly Tyr Arg  
 180 185 190

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Gln Asp Trp Lys Leu Ser Phe Met Lys Asp Thr Val Glu Arg Gly Gly  
195 200 205

Trp Gln Gln Gly Gly Ile Leu Val Ala Gly Pro Gly Lys Asp Asn Ile  
210 215 220

Ser Tyr Ile Arg Lys Asp Lys Glu Ala Gly Asp Asp Pro Pro Val Glu  
225 230 235 240

Glu Ile Leu Lys Ala Cys Cys Ala  
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<210> 2635

<211> 669

<212> DNA

<213> Arabidopsis thaliana

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tctgcagtca gttcaaatgc gaaaccaaag gtaccagtta cagttcctgc accggtttct 180  
tcttcgggta agccgggttc tcttcggca ttgaactatg taactctcgg aacattcagc 240  
tgggatcaag acaatgacaa agtcaagatg tacatatcct tggaagggtg tgatgaggac 300  
aagggttcaag ctgagttcaa gccaatgtct ttagacatca agatccatga tgtacaagga 360  
aaaaattacc gatgtgccat cccgaagttg tgtaaggaga ttatgcctga gaaatgtaaa 420  
gtgcttgtaa agcctaagag gatagttatc actatgggtc agtcttcag aggaactgg 480  
cttgacattc accacaaga agacaagatt aaaccgagtt tggagaaaga gaaagaccca 540  
atggctggaa ttatgggat gatgaagaac ttgtatgagg atggagatga agaaatgaag 600  
aagacaatag ctaaaagcctg gacagatgct aggtcaggca aagcagcaga tcctttaaaa 660  
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<210> 2636

<211> 222

<212> PRT

<213> Arabidopsis thaliana

&lt;400&gt; 2636

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20 25 30Ser Asn Leu Glu Lys Leu Arg Asp Ser Ala Val Ser Ser Asn Ala Lys  
35 40 45Pro Lys Val Pro Val Thr Val Pro Ala Pro Val Ser Ser Ser Gly Lys  
50 55 60Pro Val Ser Ser Ser Ala Leu Asn Tyr Val Thr Leu Gly Thr Phe Ser  
65 70 75 80Trp Asp Gln Asp Asn Asp Lys Val Lys Met Tyr Ile Ser Leu Glu Gly  
85 90 95Val Asp Glu Asp Lys Val Gln Ala Glu Phe Lys Pro Met Ser Leu Asp  
100 105 110Ile Lys Ile His Asp Val Gln Gly Lys Asn Tyr Arg Cys Ala Ile Pro  
115 120 125Lys Leu Cys Lys Glu Ile Met Pro Glu Lys Cys Lys Val Leu Val Lys  
130 135 140Pro Lys Arg Ile Val Ile Thr Met Val Lys Ser Ser Arg Gly Asn Trp  
145 150 155 160Leu Asp Ile His His Lys Glu Asp Lys Ile Lys Pro Ser Leu Glu Lys  
165 170 175Glu Lys Asp Pro Met Ala Gly Ile Met Gly Met Met Lys Asn Leu Tyr  
180 185 190Glu Asp Gly Asp Glu Glu Met Lys Lys Thr Ile Ala Lys Ala Trp Thr  
195 200 205Asp Ala Arg Ser Gly Lys Ala Ala Asp Pro Leu Lys Gly Leu  
210 215 220

&lt;210&gt; 2637

&lt;211&gt; 1374



&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2637

atggatgcag gtagtaacaa cactttcttct cactacaaga cgcaggctcg ttgccctctt	60
caagaacact ttcttcccag gaaaccttct aaggaaaacc tggacagggt cataccgaac	120
agatcagcga tgaattttga ctatgctcac ttgccctca ctgaagggaag aaaaggtaag	180
gatcagactg cagcggtaag ttccatctcc aaagaggcct acaggaagca attggctgag	240
accatgaact tgaaccacac aaggattctc gccttcagaa acaaacctca ggctcctgtc	300
gaactgcttc ccagcaatca ctctgcttct cttcaccaac agcccaaatc tgtaagacct	360
cgtcgatata ttctcagac ttctgagagg accttggatg cacttgacat tgttgacgat	420
ttctacctca acttgctgga ctggggaagt gcaaatgtct tagccatagc gttggaccac	480
actgtctact tgtgggatgc ttccactggt tctacatctg agcttgtgac cattgatgag	540
gagaagggac ctgtcacaag tatcaactgg gctcctgatg gtcgtcatgt tgcagttgga	600
ctcaacaact ctgaagtcca gctgtgggat tctgcatcca accgtcaact gagaacattg	660
aagggtggtc accagtcacg agtaggatca ctggcatgga acaatcacat ctttactact	720
ggaggaatgg atggactgat catcaacaat gatgtgagga tcagatcacc cattgtggaa	780
acttacagag gtcacactca agaagtgtgt gggctcaagt ggtcaggatc tggacaacaa	840
ctagcaagtg gtggcaacga caatgtggtt cacatctggg atcgtttctgt cgcttctctca	900
aactcaacca cacaatggct gcacaggctt gaggaacata catctgctgt gaaggctctt	960
gcgtggtgcc ctttccaagc gaatttgctt gcaactggtg gtggtggagg agacaggacg	1020
atcaagtctt ggaatactca cactggggct tgcttgaatt cagttagacac tggttcccaa	1080
gtttgttctg tgttatggag caagaatgaa agagagtgtc ttagctcaca cgggtttaca	1140
cagaatcagc tcacactttg gaagtatcca tccatgggtg aaatggctga gctcactggt	1200
catacatcaa gagttctata tatggcccag agtcagatg gttgtaccgt agcttcagca	1260
gcaggagatg agactctgag gttctggaat gtttttgagg taccagagac cgccaaaaaa	1320
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&lt;210&gt; 2638

&lt;211&gt; 457

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2638

Met Asp Ala Gly Met Asn Asn Thr Ser Ser His Tyr Lys Thr Gln Ala  
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 Arg Cys Pro Leu Gln Glu His Phe Leu Pro Arg Lys Pro Ser Lys Glu  
 20 25 30  
 Asn Leu Asp Arg Phe Ile Pro Asn Arg Ser Ala Met Asn Phe Asp Tyr  
 35 40 45  
 Ala His Phe Ala Leu Thr Glu Gly Arg Lys Gly Lys Asp Gln Thr Ala  
 50 55 60  
 Ala Val Ser Ser Pro Ser Lys Glu Ala Tyr Arg Lys Gln Leu Ala Glu  
 65 70 75 80  
 Thr Met Asn Leu Asn His Thr Arg Ile Leu Ala Phe Arg Asn Lys Pro  
 85 90 95  
 Gln Ala Pro Val Glu Leu Leu Pro Ser Asn His Ser Ala Ser Leu His  
 100 105 110  
 Gln Gln Pro Lys Ser Val Lys Pro Arg Arg Tyr Ile Pro Gln Thr Ser  
 115 120 125  
 Glu Arg Thr Leu Asp Ala Pro Asp Ile Val Asp Asp Phe Tyr Leu Asn  
 130 135 140  
 Leu Leu Asp Trp Gly Ser Ala Asn Val Leu Ala Ile Ala Leu Asp His  
 145 150 155 160  
 Thr Val Tyr Leu Trp Asp Ala Ser Thr Gly Ser Thr Ser Glu Leu Val  
 165 170 175  
 Thr Ile Asp Glu Glu Lys Gly Pro Val Thr Ser Ile Asn Trp Ala Pro  
 180 185 190  
 Asp Gly Arg His Val Ala Val Gly Leu Asn Asn Ser Glu Val Gln Leu  
 195 200 205  
 Trp Asp Ser Ala Ser Asn Arg Gln Leu Arg Thr Leu Lys Gly Gly His  
 210 215 220  
 Gln Ser Arg Val Gly Ser Leu Ala Trp Asn Asn His Ile Leu Thr Thr  
 225 230 235 240

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Gly Gly Met Asp Gly Leu Ile Ile Asn Asn Asp Val Arg Ile Arg Ser  
245 250 255

Pro Ile Val Glu Thr Tyr Arg Gly His Thr Gln Glu Val Cys Gly Leu  
260 265 270

Lys Trp Ser Gly Ser Gly Gln Gln Leu Ala Ser Gly Gly Asn Asp Asn  
275 280 285

Val Val His Ile Trp Asp Arg Ser Val Ala Ser Ser Asn Ser Thr Thr  
290 295 300

Gln Trp Leu His Arg Leu Glu Glu His Thr Ser Ala Val Lys Ala Leu  
305 310 315 320

Ala Trp Cys Pro Phe Gln Ala Asn Leu Leu Ala Thr Gly Gly Gly Gly  
325 330 335

Gly Asp Arg Thr Ile Lys Phe Trp Asn Thr His Thr Gly Ala Cys Leu  
340 345 350

Asn Ser Val Asp Thr Gly Ser Gln Val Cys Ser Leu Leu Trp Ser Lys  
355 360 365

Asn Glu Arg Glu Leu Leu Ser Ser His Gly Phe Thr Gln Asn Gln Leu  
370 375 380

Thr Leu Trp Lys Tyr Pro Ser Met Val Lys Met Ala Glu Leu Thr Gly  
385 390 395 400

His Thr Ser Arg Val Leu Tyr Met Ala Gln Ser Pro Asp Gly Cys Thr  
405 410 415

Val Ala Ser Ala Ala Gly Asp Glu Thr Leu Arg Phe Trp Asn Val Phe  
420 425 430

Gly Val Pro Glu Thr Ala Lys Lys Ala Ala Pro Lys Ala Val Ser Glu  
435 440 445

Pro Phe Ser His Val Asn Arg Ile Arg  
450 455

<210> 2639

<211> 891

<212> DNA

<213> Arabidopsis thaliana

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<400> 2639
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gctgaagctg gattaagcag cgcttcatgg tcagccccta ttgacattgt ggcagatgtc      180
aaatccgaaa ggggtgtagt tcttggtggg aatggtttcg ttggctcagc tatctgcaaa      240
gcagcaatct ccaatgggat tgaggttggt agtggttagca ggtcaggctg tcctaacttc      300
gaagattcat ggttggtatc ggttacatgg gttactggtg atgttttcta tttgaattgg      360
gatgaagtac ttcttggtgc tactgctgta gtttcaacca ttggtggttt tggaaatgaa      420
gaacagatga aaagaatcaa tggatgaagct aacggtaccg ctgtgaatgc tgctaaggat      480
tttgggggtc ctaagttcgt cttgatcacg gttcacgatt acaatcttcc gccatttatt      540
ctctccaacg gatatttcac tggaaaaacgt aacgcggagg cagaacttct ttccaagtat      600
cccacctcag gagtgtgtct aagaccgggt ttcatatacg ggaaacgaaa agtgaacgga      660
atcgagggtc cgcttgatct agtcggggag ccactagaca agatctatga ttcagcagag      720
aggttcatta gaccattgag gtctctccct gcactgtatc tcactttggc tccaccgggt      780
aacgtcgatg atttagcact tgctgtgatc aacgctgtta aagatgacga cttctttggc      840
attttcacta ttgagcagat caaagaagca gctgcacaaa tgagagcggtg a          891

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<210> 2640

<211> 296

<212> PRT

<213> *Arabidopsis thaliana*

<400> 2640

Met Thr Ser Phe Leu Ser Phe Ser Ala Ile Ser Ala His Pro Pro Thr  
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Phe Ser Gly Ala Ser Phe Arg Pro Arg Ser Phe Ser Pro Arg Leu Phe  
20 25 30

Lys Ser Cys Val Lys Cys Thr Tyr Ala Glu Ala Gly Leu Ser Ser Ala  
35 40 45

Ser Trp Ser Ala Pro Ile Asp Ile Val Ala Asp Val Lys Ser Glu Arg  
50 55 60

Val Val Val Leu Gly Gly Asn Gly Phe Val Gly Ser Ala Ile Cys Lys  
65 70 75 80

Ala Ala Ile Ser Asn Gly Ile Glu Val Val Ser Val Ser Arg Ser Gly  
85 90 95

Arg Pro Asn Phe Glu Asp Ser Trp Leu Asp Gln Val Thr Trp Val Thr  
100 105 110

Gly Asp Val Phe Tyr Leu Asn Trp Asp Glu Val Leu Leu Gly Ala Thr  
115 120 125

Ala Val Val Ser Thr Ile Gly Gly Phe Gly Asn Glu Glu Gln Met Lys  
130 135 140

Arg Ile Asn Gly Glu Ala Asn Val Thr Ala Val Asn Ala Ala Lys Asp  
145 150 155 160

Phe Gly Val Pro Lys Phe Val Leu Ile Thr Val His Asp Tyr Asn Leu  
165 170 175

Pro Pro Phe Ile Leu Ser Asn Gly Tyr Phe Thr Gly Lys Arg Asn Ala  
180 185 190

Glu Ala Glu Leu Leu Ser Lys Tyr Pro Thr Ser Gly Val Val Leu Arg  
195 200 205

Pro Gly Phe Ile Tyr Gly Lys Arg Lys Val Asn Gly Ile Glu Val Pro  
210 215 220

Leu Asp Leu Val Gly Glu Pro Leu Asp Lys Ile Tyr Asp Ser Ala Glu  
225 230 235 240

Arg Phe Ile Arg Pro Leu Arg Ser Leu Pro Ala Ser Asp Leu Ile Leu  
245 250 255

Ala Pro Pro Val Asn Val Asp Asp Leu Ala Leu Ala Val Ile Asn Ala  
260 265 270

Val Lys Asp Asp Asp Phe Phe Gly Ile Phe Thr Ile Glu Gln Ile Lys  
275 280 285

Glu Ala Ala Ala Lys Met Arg Ala  
290 295

<210> 2641

<211> 807

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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<400> 2641
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aagaaccaat cgattgttcc cgttgcaagg ttgtttggac cggcgatttt cgaatcatcc    180
aaattgaaag tactcttctt aggggttgat gagaagaagc atccttcaac gctccctagg    240
acttacacac tcactcacag tgacattaca gctaaactaa ctttagctat ttctcaatcc    300
ataaacaact ctcagtgtca aggatgggca aataggctat accgggatga agttgtggca    360
gaatggaaga aagtgaagag gaaaatgtcg cttcacgttc attgtcacat aagcggtggc    420
catttccctt tagatctctt tgcaaaagtt cgatatattca tcttttgcag agaactacct    480
gtggtgttga aggcctttgt gcatggagat ggggaacttgt tgaacaacta tcctgagcta    540
caagaagctc ttgtttgggt ctatttccat tctaagtca atgagttaa caaagtcgag    600
tgttggggtc cgtcttggga agctgtttcg cctgatggtc acaagactga gactcttccc    660
gaggctcggg gtgcggagca gtgtagttgt tgttttccaa ccgttagctc gattccatgg    720
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gctactccaa atccggagaa actctag                                     807

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&lt;210&gt; 2642

&lt;211&gt; 268

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2642

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Met Cys Ser Leu Ser Ala Ile Met Leu Leu Pro Thr Lys Leu Lys Pro
1          5          10          15

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Ala Tyr Ser Asp Lys Arg Ser Asn Ser Ser Ser Ser Ser Leu Phe
          20          25          30

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Phe Asn Asn Arg Arg Ser Lys Lys Asn Gln Ser Ile Val Pro Val
          35          40          45

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Ala Arg Leu Phe Gly Pro Ala Ile Phe Glu Ser Ser Lys Leu Lys Val
          50          55          60

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Leu Phe Leu Gly Val Asp Glu Lys Lys His Pro Ser Thr Leu Pro Arg  
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 Thr Tyr Thr Leu Thr His Ser Asp Ile Thr Ala Lys Leu Thr Leu Ala  
 85 90 95  
 Ile Ser Gln Ser Ile Asn Asn Ser Gln Leu Gln Gly Trp Ala Asn Arg  
 100 105 110  
 Leu Tyr Arg Asp Glu Val Val Ala Glu Trp Lys Lys Val Lys Gly Lys  
 115 120 125  
 Met Ser Leu His Val His Cys His Ile Ser Gly Gly His Phe Leu Leu  
 130 135 140  
 Asp Leu Phe Ala Lys Phe Arg Tyr Phe Ile Phe Cys Lys Glu Leu Pro  
 145 150 155 160  
 Val Val Leu Lys Ala Phe Val His Gly Asp Gly Asn Leu Leu Asn Asn  
 165 170 175  
 Tyr Pro Glu Leu Gln Glu Ala Leu Val Trp Val Tyr Phe His Ser Asn  
 180 185 190  
 Val Asn Glu Phe Asn Lys Val Glu Cys Trp Gly Pro Leu Trp Glu Ala  
 195 200 205  
 Val Ser Pro Asp Gly His Lys Thr Glu Thr Leu Pro Glu Ala Arg Cys  
 210 215 220  
 Ala Asp Glu Cys Ser Cys Cys Phe Pro Thr Val Ser Ser Ile Pro Trp  
 225 230 235 240  
 Ser His Ser Leu Ser Asn Glu Gly Val Asn Gly Tyr Ser Gly Thr Gln  
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<210> 2643

<211> 1299

<212> DNA

<213> Arabidopsis thaliana

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tggttagccg gatctctcgg tgtcattatc gtcggattcg ccacctatta ctgcatgctc 240
ctctcattc agtgcagaga taagctagaa tcggaagaag gagaagaaga atcgaaaact 300
tatggtgatt taggtttcaa atgtatggga acaaaaggtc gatacttaac cgaattcctc 360
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tcattccata ttagttcgta tgggttaagt atgggtttctt tcatattgat tctggtttcca 480
atcgaagttg gattgctggt gatcacttct ttatcagctc tctcgctttt cagtatcttt 540
gctgatatat gcaacatcat agcaatgtgt tttggtgtca aagaaaatgt ggaatggtg 600
attgaaggag acttctcggt tagtgataga actgctattt cgtctaccat tggtggttta 660
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attacgtttg tctatgtgtt gttcgggttt tgtggttata tggcttatgg tgatcaaaaa 840
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gagcagaaac tgaagaggat agactggcct caaaagcatc ataatgggta cagcaacgaa 1020
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<210> 2644

<211> 432

<212> PRT

<213> *Arabidopsis thaliana*

<400> 2644

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 1 5 10 15



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 20 25 30  
 Ala Leu Gln Thr Leu Gly Asn Ile Ile Val Ser Ile Val Gly Thr Gly  
 35 40 45  
 Val Leu Gly Leu Pro Tyr Ala Phe Arg Ile Ala Gly Trp Leu Ala Gly  
 50 55 60  
 Ser Leu Gly Val Ile Ile Val Gly Phe Ala Thr Tyr Tyr Cys Met Leu  
 65 70 75 80  
 Leu Leu Ile Gln Cys Arg Asp Lys Leu Glu Ser Glu Glu Gly Glu Glu  
 85 90 95  
 Glu Ser Lys Thr Tyr Gly Asp Leu Gly Phe Lys Cys Met Gly Thr Lys  
 100 105 110  
 Gly Arg Tyr Leu Thr Glu Phe Leu Ile Phe Thr Ala Gln Cys Gly Gly  
 115 120 125  
 Ser Val Ala Tyr Leu Val Phe Ile Gly Arg Asn Leu Ser Ser Ile Phe  
 130 135 140  
 Ser Ser Tyr Gly Leu Ser Met Val Ser Phe Ile Leu Ile Leu Val Pro  
 145 150 155 160  
 Ile Glu Val Gly Leu Ser Trp Ile Thr Ser Leu Ser Ala Leu Ser Pro  
 165 170 175  
 Phe Ser Ile Phe Ala Asp Ile Cys Asn Ile Ile Ala Met Cys Phe Val  
 180 185 190  
 Val Lys Glu Asn Val Glu Met Val Ile Glu Gly Asp Phe Ser Phe Ser  
 195 200 205  
 Asp Arg Thr Ala Ile Ser Ser Thr Ile Gly Gly Leu Pro Phe Ala Gly  
 210 215 220  
 Gly Val Ala Val Phe Cys Phe Glu Gly Phe Ala Met Thr Leu Ala Leu  
 225 230 235 240  
 Glu Ser Ser Met Arg Glu Arg Glu Ala Phe Pro Lys Leu Leu Ala Lys  
 245 250 255  
 Val Leu Ala Gly Ile Thr Phe Val Tyr Val Leu Phe Gly Phe Cys Gly  
 260 265 270

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Tyr Met Ala Tyr Gly Asp Gln Thr Lys Asp Ile Ile Thr Leu Asn Leu  
 275 280 285

Pro Asn Asn Trp Ser Ala Ile Ala Val Gln Ile Gly Leu Cys Val Gly  
 290 295 300

Leu Thr Phe Thr Phe Pro Ile Met Val His Pro Leu Asn Glu Ile Ile  
 305 310 315 320

Glu Gln Lys Leu Lys Arg Ile Asp Trp Leu Gln Lys His His Asn Gly  
 325 330 335

Tyr Ser Asn Glu Thr Gly Ser Val Ser Lys Phe Ala Ile Phe Thr Thr  
 340 345 350

Arg Thr Leu Leu Val Val Gly Leu Ala Ala Ile Ala Ser Leu Val Pro  
 355 360 365

Gly Phe Gly Thr Phe Ala Ser Leu Val Gly Ser Thr Leu Cys Ala Leu  
 370 375 380

Ile Ser Phe Val Leu Pro Ala Ser Tyr His Leu Thr Leu Leu Gly Pro  
 385 390 395 400

Ser Leu Asn Val Trp Asn Lys Ser Ile Asp Val Phe Ile Val Ile Cys  
 405 410 415

Gly Leu Ile Phe Ala Val Tyr Gly Thr Tyr Asn Thr Ile Val Gly Val  
 420 425 430

<210> 2645

<211> 1863

<212> DNA

<213> Arabidopsis thaliana

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tacaggatag	atccgagtaa	tcccgggtcg	gatcttgccg	gagaacagc	agccgccatg	540
gccgccgat	caattgtttt	ccgccgatct	aaccctgttt	actctaggct	actactcact	600
cacgcctatc	agttgtttga	tttcgccgac	aaatacagag	gaaaatacga	cagcagtatc	660
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ccagtcagag	cttctgggtc	agtggtctata	gttcagaaga	taactagtct	atgggtctca	1620
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aaaagtctca	acctttcgtat	caagaatctc	tatggaccaa	tctggggact	ctcgagatca	1740
ggcaactcgt	tcggtttacc	ctcgtggatg	cactcattgc	catccggaag	atccctagag	1800
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tga						1863

&lt;210&gt; 2646

&lt;211&gt; 620

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2646

Met Glu Lys Phe Ala Pro Val Ala Ala Leu Leu Leu Leu Leu Cys  
 1 5 10 15  
 Phe Pro Val Ala Phe Ser Gly His Asp Tyr Gly Gln Ala Leu Ser Lys  
 20 25 30  
 Ser Leu Leu Phe Phe Glu Ala Gln Arg Ser Gly Val Leu Pro Arg Asn  
 35 40 45  
 Gln Arg Val Thr Trp Arg Ser His Ser Gly Leu Thr Asp Gly Lys Ser  
 50 55 60  
 Ser Gly Val Asn Leu Val Gly Gly Tyr Tyr Asp Ala Gly Asp Asn Val  
 65 70 75 80  
 Lys Phe Gly Leu Pro Met Ala Phe Thr Val Thr Met Met Ala Trp Ser  
 85 90 95  
 Val Ile Glu Tyr Gly Asn Gln Leu Gln Ala Asn Gly Glu Leu Gly Asn  
 100 105 110  
 Ser Ile Asp Ala Ile Lys Trp Gly Thr Asp Tyr Phe Ile Lys Ala His  
 115 120 125  
 Pro Glu Pro Asn Val Leu Tyr Gly Glu Val Gly Asp Gly Asn Thr Asp  
 130 135 140  
 His Tyr Cys Trp Gln Arg Pro Glu Glu Met Thr Thr Asp Arg Lys Ala  
 145 150 155 160  
 Tyr Arg Ile Asp Pro Ser Asn Pro Gly Ser Asp Leu Ala Gly Glu Thr  
 165 170 175  
 Ala Ala Ala Met Ala Ala Ala Ser Ile Val Phe Arg Arg Ser Asn Pro  
 180 185 190  
 Val Tyr Ser Arg Leu Leu Leu Thr His Ala Tyr Gln Leu Phe Asp Phe  
 195 200 205  
 Ala Asp Lys Tyr Arg Gly Lys Tyr Asp Ser Ser Ile Thr Val Ala Gln  
 210 215 220  
 Lys Tyr Tyr Arg Ser Val Ser Gly Tyr Asn Asp Glu Leu Leu Trp Ala  
 225 230 235 240

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Ala Ala Trp Leu Tyr<sub>245</sub> Gln Ala Ser Asn<sub>250</sub> Asn<sub>250</sub> Gln Phe Tyr Leu Asp<sub>255</sub> Tyr  
 Leu Gly Arg Asn<sub>260</sub> Gly Asp Ala Met Gly<sub>265</sub> Gly Thr Gly Trp Ser<sub>270</sub> Met Thr  
 Glu Phe Gly<sub>275</sub> Trp Asp Val Lys Tyr<sub>280</sub> Ala Gly Val Gln<sub>285</sub> Thr Leu Val Ala  
 Lys Phe<sub>290</sub> Leu Met Gln Gly Lys<sub>295</sub> Ala Gly Arg His Ala<sub>300</sub> Pro Val Phe Arg  
 Lys Tyr<sub>305</sub> Gln Glu Lys Ala<sub>310</sub> Asp Ser Phe Met Cys<sub>315</sub> Ser Leu Leu Gly Lys<sub>320</sub>  
 Ser Ser Arg Asn<sub>325</sub> Ile Gln Lys Thr Pro Gly<sub>330</sub> Gly Leu Ile Phe Arg<sub>335</sub> Gln  
 Arg Trp Asn<sub>340</sub> Asn<sub>340</sub> Met Gln Phe Val Thr<sub>345</sub> Ser Ala Ser Phe Leu<sub>350</sub> Thr Thr  
 Val Tyr Ser<sub>355</sub> Asp Tyr Leu Thr Ser<sub>360</sub> Ser Arg Ser Asn<sub>365</sub> Leu Arg Cys Ala  
 Ala Gly<sub>370</sub> Asn Val Ala Pro Ser<sub>375</sub> Gln Leu Leu Ser Phe<sub>380</sub> Ala Lys Ser Gln  
 Val<sub>385</sub> Asp Tyr Ile Leu Gly<sub>390</sub> Asp Asn Pro Arg Ala<sub>395</sub> Thr Ser Tyr Met Val<sub>400</sub>  
 Gly Tyr Gly Asn<sub>405</sub> Asn<sub>405</sub> Phe Pro Gln Arg Val<sub>410</sub> His His Arg Gly Ser<sub>415</sub> Ser  
 Ile Val Ser<sub>420</sub> Val Lys Val Asp Arg Thr<sub>425</sub> Phe Val Thr Cys<sub>430</sub> Arg Gly Gly  
 Tyr Ala Thr<sub>435</sub> Trp Phe Ser Arg Lys<sub>440</sub> Gly Ser Asp Pro Asn<sub>445</sub> Leu Leu Thr  
 Gly Ala Ile Val Gly Gly<sub>455</sub> Pro Asp Ala Tyr Asp Asn<sub>460</sub> Phe Ala Asp Arg  
 Arg<sub>465</sub> Asp Asn Tyr Glu Gln<sub>470</sub> Thr Glu Pro Ala Thr<sub>475</sub> Tyr Asn Asn Ala Pro<sub>480</sub>  
 Leu Leu Gly Val<sub>485</sub> Leu Ala Arg Leu Ser Ser<sub>490</sub> Gly His Ser Gly Tyr<sub>495</sub> Ser

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Gln Phe Leu Pro Val Val Pro Ala Pro Val Val Arg Arg Pro Met Pro  
500 505 510

Ile Arg Arg Pro Lys Val Thr Thr Pro Val Arg Ala Ser Gly Pro Val  
515 520 525

Ala Ile Val Gln Lys Ile Thr Ser Ser Trp Val Ser Lys Gly Arg Thr  
530 535 540

Tyr Tyr Arg Tyr Ser Thr Thr Val Ile Asn Lys Ser Ser Arg Pro Leu  
545 550 555 560

Lys Ser Leu Asn Leu Ser Ile Lys Asn Leu Tyr Gly Pro Ile Trp Gly  
565 570 575

Leu Ser Arg Ser Gly Asn Ser Phe Gly Leu Pro Ser Trp Met His Ser  
580 585 590

Leu Pro Ser Gly Lys Ser Leu Glu Phe Val Tyr Ile His Ser Thr Thr  
595 600 605

Pro Ala Asn Val Ala Val Ser Ser Tyr Thr Leu Ala  
610 615 620

<210> 2647

<211> 681

<212> DNA

<213> Arabidopsis thaliana

<400> 2647

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ccggcaaaa atcaaatccc taacaacaa gtaacggaga gtgtgaatgt attaaaaacg	180
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aaggctaaga ttgatccatc cactttcctt gaaacgcttg gtggctccga gtctcctgga	300
cgaacatgga tgcttatctt caccgccgag aagaaactga cgaagggtcg ttatttcctt	360
ctaactgctg ttcagagatt tgatgctgcg ggaaaaagaa tagagaatgg ggtgtatctt	420
ggtccatttg gagcattaac attcgaagga aggttttcat ggaagaatcg gatactagct	480
tttgtcttcg aacagatccg cataaagatt ggaccattag atcctctaga gttcagcttg	540
gggaagaaag acgctgtgga agagcctagt aataaagacc ctttcttcat ttggttctac	600

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tgctgtcgca ttgcttccta a 681

<210> 2648

<211> 226

<212> PRT

<213> Arabidopsis thaliana

<400> 2648

Met Met Val Ser Leu Ala Ser Cys Val Ser Ser Pro Ser Ser Ser Ser  
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Leu Phe Phe Ser Arg Arg Glu Arg Leu His Leu Val Lys Ala Thr Val  
20 25 30

Asp Gly Arg Asn Gln Ile Val Pro Pro Ala Lys Asp Gln Ile Pro Asn  
35 40 45

Lys Gln Val Thr Glu Ser Val Asn Val Leu Lys Thr Ala Ala Lys Thr  
50 55 60

Arg Lys Val Ala Ala Asp Glu Ile Leu Ala Ala Phe Ser Ala Ile Glu  
65 70 75 80

Lys Ala Lys Ile Asp Pro Ser Thr Phe Leu Glu Thr Leu Gly Gly Pro  
85 90 95

Glu Ser Pro Gly Arg Thr Trp Met Leu Ile Phe Thr Ala Glu Lys Lys  
100 105 110

Leu Thr Lys Gly Arg Tyr Phe Pro Leu Thr Ala Val Gln Arg Phe Asp  
115 120 125

Ala Ala Gly Lys Arg Ile Glu Asn Gly Val Tyr Leu Gly Pro Phe Gly  
130 135 140

Ala Leu Thr Phe Glu Gly Arg Phe Ser Trp Lys Asn Arg Ile Leu Ala  
145 150 155 160

Phe Val Phe Glu Gln Ile Arg Ile Lys Ile Gly Pro Leu Asp Pro Leu  
165 170 175

Glu Phe Ser Leu Gly Lys Lys Asp Ala Val Glu Glu Pro Ser Asn Lys  
Page 3705

Asp Pro Phe Phe Ile Trp Phe Tyr Ile Asp Glu Glu Ile Ala Val Ala  
195 200

Arg Gly Arg Ser Gly Gly Thr Ala Phe Trp Cys Arg Cys Arg Arg Ile  
210 215 220

Ala Ser  
225

<210> 2649

<211> 1284

<212> DNA

<213> Arabidopsis thaliana

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acggcattcg aattagcctc atccaagtc acatccgtcg ccgatctacc accggaacga 240  
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cgctccgatg aagcttctca tgagcttaat tccttgacg atttcgacgg gacgcattac 480  
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cgtttatatg ttttgcttga ctttgcttga gatcgaatca gagagaaaga atctcagagt 660  
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gggtttcatt taggtcacaa ggaatttggg gtgtctttgg atttgatgaa ggaattgatc 780  
aatcgtgatc cgttagaccg ggttttgatt tcgaaactag ggtctgttca gatgcagttt 840  
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gaaagggata actctgatat tatcgctgtc aacaataagg ctctttgttt gatgtacttg 1080  
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gctttgaacg agagcttggt ggtgaatttg tgtagtatgt atgagttggc ttatgttaat 1200  
 cataactgatg ttaagcggac gttaaacaat tggattgcac gtgttgctcc tgatgacttt 1260  
 gattcatctt gtaccagagt ttga 1284

<210> 2650

<211> 427

<212> PRT

<213> Arabidopsis thaliana

<400> 2650

Met Val Ser Ile Gly Lys Thr Thr Gln Ile Gln Arg Pro Asn Gln Val  
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 20 25 30

Pro Glu Ser Glu Thr Arg Pro Glu Phe Asn Pro Ser Ser Thr Asp Ser  
 35 40 45

Thr Ala Met Ala Glu Ser Thr Asp Ala Gly Glu Pro Thr Ala Phe Glu  
 50 55 60

Leu Ala Ser Ser Gln Val Thr Ser Val Ala Asp Leu Pro Pro Glu Arg  
 65 70 75 80

Phe Asn Ser Leu Asp Glu Leu Thr His Asp Leu Gly Ser Leu His Glu  
 85 90 95

Leu Ser Thr Arg Gly Ser Trp Gln Ala Ile Leu Glu Lys Ile Ser Gln  
 100 105 110

Ala Arg Ala Leu Phe Leu Leu Thr Lys Pro His Glu His Leu Thr Tyr  
 115 120 125

Leu Thr Tyr Gln Val Met Ala Leu Ala Lys Leu Arg Arg Ser Asp Glu  
 130 135 140

Ala Ser His Glu Leu Asn Ser Leu His Asp Phe Asp Gly Thr His Tyr  
 145 150 155 160

Arg Tyr Glu Ser Phe Pro Glu Ile Tyr Pro Asn Arg Arg Gly Ser Met  
 165 170 175

047-E2F-PCT.ST25.txt

Val Pro Phe Ser Leu Arg Trp Leu Tyr Ala Leu Ile Pro Thr Lys Leu  
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Gly Asn Arg Gln Glu Gly Leu Asp Arg Leu Tyr Val Leu Leu Asp Phe  
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Val Arg Asp Arg Ile Arg Glu Lys Glu Ser Gln Ser Leu Glu Ser Ser  
210 215 220

Val Glu Leu Trp Lys Lys Arg Glu Thr Phe Val Met Asn Cys Leu Leu  
225 230 235 240

Gly Phe His Leu Gly His Lys Glu Phe Gly Val Ser Leu Asp Leu Met  
245 250 255

Lys Glu Leu Ile Asn Arg Asp Pro Leu Asp Pro Val Leu Ile Ser Lys  
260 265 270

Leu Gly Ser Val Gln Met Gln Phe Gly Asp Val Glu Gly Ala Lys Thr  
275 280 285

Thr Phe Asp Arg Val Glu Lys Met Leu Asn Glu Gly Lys Ser Asn Gly  
290 295 300

Leu Leu Asn Glu Ile Gln Phe Asn Asn Leu Val Gly Arg Asn Lys Ala  
305 310 315 320

Leu Val Tyr Val Val Ala Lys Asp Tyr Val Ser Ala Val Arg Glu Tyr  
325 330 335

Asp Lys Cys Ile Glu Arg Asp Asn Ser Asp Ile Ile Ala Val Asn Asn  
340 345 350

Lys Ala Leu Cys Leu Met Tyr Leu Arg Asp Leu Ser Asp Ala Ile Lys  
355 360 365

Val Met Glu Ser Ala Leu Glu Arg Val Pro Thr Ala Ala Leu Asn Glu  
370 375 380

Ser Leu Val Val Asn Leu Cys Ser Met Tyr Glu Leu Ala Tyr Val Asn  
385 390 395 400

His Thr Asp Val Lys Arg Thr Leu Asn Asn Trp Ile Ala Arg Val Ala  
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047-E2F-PCT.ST25.txt

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<211> 1026

<212> DNA

<213> *Arabidopsis thaliana*

<400> 2651

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<211> 341

<212> PRT

<213> *Arabidopsis thaliana*

<400> 2652

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Page 3709

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Cys Ser Ser<sub>35</sub> Glu Thr Gly Leu Ser<sub>40</sub> Ile Arg Arg Gln<sub>45</sub> Ala Leu Glu Gln  
Val Asp<sub>50</sub> Ser Lys Leu Ser<sub>55</sub> Ser Gly Asp Glu Arg Ala<sub>60</sub> Ala Leu Ser Leu  
Val Lys Asp Leu Gln<sub>65</sub> Gly<sub>70</sub> Lys Pro Asp Gly<sub>75</sub> Leu Arg Cys Phe Gly<sub>80</sub> Ala  
Ala Arg Gln Val<sub>85</sub> Pro Gln Arg Leu Tyr Thr<sub>90</sub> Leu Glu Glu Leu<sub>95</sub> Lys Leu  
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Gly Ser Ile<sub>115</sub> Glu Arg Asn Leu Gln<sub>120</sub> Ile Ala Ala Val Ser<sub>125</sub> Gly Gly Ile  
Val Ala Trp Lys Ala Phe Asp<sub>135</sub> Leu Ser Ser Gln Gln<sub>140</sub> Leu Phe Phe Leu  
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Val Ala Tyr<sub>195</sub> Leu Val Gly Ile Leu<sub>200</sub> Pro Arg Gly Tyr Thr<sub>205</sub> Leu Ser Ser  
Leu Glu Ala Leu Gln Lys Glu<sub>215</sub> Gly Ser Leu Asn Ile<sub>220</sub> Gln Ala Gly Ser  
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 260 265 270

Ile Ser Lys Leu Asp Gly Leu Val Lys Ser Leu Gly Phe Thr Gln Lys  
 275 280 285

Lys Ala Asp Ser Gln Val Arg Trp Ser Val Leu Asn Thr Ile Leu Leu  
 290 295 300

Leu Arg Arg His Glu Ile Ala Arg Ser Lys Leu Ala Gln Ala Met Ser  
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Lys Gly Glu Ser Val Gly Ser Cys Ile Gln Ile Ile Glu Asp Ser Ile  
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Asp Pro Ser Asp Ile  
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<211> 3267

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 2654

&lt;211&gt; 1088

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2654

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Ala Lys Phe Ser Phe Leu Ala Phe Glu Asp Gly Asn Arg Thr Cys Ser
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Ser Cys Lys Phe Arg Cys Lys Leu Asp Asp Arg Ile Ser Leu Asp Cys
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His Gln Arg Lys Val Ser Tyr Ser Lys Leu Leu Asp Gly Asp His Thr
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Leu Glu Val Cys Ala Asn Arg Met His Gly Phe Gly Cys Asn His Tyr
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Asn Trp Thr Val Asp Thr Val Ser Pro Thr Ala Phe Val Thr Ala Ser
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Met Pro Phe Thr Ser Ala Gln Asn Val Ser Val Asn Ile Thr Phe Thr  
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Cys Asp Leu Leu Val Tyr Gly Ala Gly Gln Val Ile Pro Ser Ser Phe  
165 170 175

Thr Val Leu Asp Gln Tyr Leu Arg Tyr Ser Leu Leu Val Gly Leu Ser  
180 185 190

Pro Asp Ala Gln Tyr Gly Arg Ile Val Leu Val Met Asn Lys Ser Val  
195 200 205

Cys Ser Asp Ile Ala Gly Asn Asn Phe Lys Arg Ala Leu Gly Ser Arg  
210 215 220

Phe Phe Val His Phe Asp Arg Arg Asn Val Leu Val Asn Leu Arg Thr  
225 230 235 240

His Val Pro Glu Lys Leu Leu Lys Leu Asn Asn Gln Thr Arg Thr Val  
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Gln Ala Thr Asn Asp Asn Asn Lys Leu Asn Val Tyr Leu Tyr Phe Ser  
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Glu Pro Val Leu Asn Ser Ser Ala Glu Ile Leu Arg Arg Leu Asn Thr  
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Asn Gln Gly Asp Leu Leu Pro Ile Asp Gly Asn Thr Asn Gly Asn Arg  
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Arg Phe Ala Phe Met Val Thr Asn Thr Ser Arg Arg Ala Ile Val Thr  
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Val Thr Leu Asp Ser Asn Ser Ile Arg Ser Arg His Gly Thr Pro Ala  
325 330 335

Ser Pro Thr Ala Pro Leu Thr Phe Leu Tyr Asp Thr Glu Arg Pro His  
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Val Ile Leu Asn Thr Thr Ser Gly Met Arg Thr Arg Lys His Thr Ile  
355 360 365

Pro Val Trp Ile Lys Phe Met Lys Pro Val Phe Gly Phe Asn Ser Ser  
370 375 380



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 Asn Leu Phe Arg Thr Ala Cys His Ile Gln Phe Phe Ala Leu Thr Arg  
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 Ile Gln Trp Ile Ile Pro Tyr Phe Pro Leu Pro Trp Glu Thr Lys Ile  
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 Lys Glu Gln Ile Met Val Ala Thr Ser Pro Tyr Ile Gly Pro His Ser  
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 580 585 590  
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 Trp Ile Ala Ile Ile Gly Gly Ser Leu Val Leu Leu His Ile Val Leu

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 Ala Leu Pro Ser Ile Cys Lys Ala Ala Arg Ser Leu Ile Gln Gly Tyr  
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Gly Phe Ile Met Leu Met Cys Asn Glu Trp Tyr Ser Leu Tyr Lys Gln  
930 935 940

Thr Lys Arg Leu Asp Gln Ile Asn Arg Ser Phe Leu Ser Gly Leu Lys  
945 950 955 960

Met Phe Ile Ile Gly Leu Ala Ala Leu Ile Leu Pro Gln Lys Met Ile  
965 970 975

Lys Asn Lys Ile Pro Val Ala Gln Leu Glu Ala Arg Ser Ser Ser Asn  
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Gly Gly Thr Thr Pro Glu Phe Arg Tyr Arg Asn Ser Ser Gly Ser Arg  
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Ser Ser Gly Ser Leu Asp Lys Pro Trp Leu Lys Gln Ile Arg Glu  
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Met Ala Lys Ser Ser Phe Thr Arg Asp Arg Ser Asn Ser Lys Val  
1025 1030 1035

Pro Ser Asp Pro Ser Cys Ser Lys Ser Gly Trp Ser Ser Ser Ile  
1040 1045 1050

Trp Gly Thr Lys Thr Ser Gly Ser Ser Ser Lys Glu Ser Ser Ala  
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<211> 368

<212> PRT

<213> *Arabidopsis thaliana*

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 Asp Ser Val Lys Pro Pro Ala Thr Pro Pro Arg Arg Leu Pro Arg Lys  
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Gly Gly Ala Arg Trp Leu Pro Cys Phe Glu Cys Gly Gly Ser Cys Lys  
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<210> 2658

<211> 259

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2658

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Asp Tyr Phe Ala Leu Ser Leu Gln Trp Pro Gly Thr Tyr Cys Arg Gly  
 35 40 45

Thr Arg His Cys Cys Ser Lys Asn Ala Cys Cys Arg Gly Ser Asp Ala  
 50 55 60

Pro Thr Gln Phe Thr Ile His Gly Leu Trp Pro Asp Tyr Asn Asp Gly  
 65 70 75 80

Ser Trp Pro Ser Cys Cys Tyr Arg Ser Asp Phe Lys Glu Lys Glu Ile  
 85 90 95

Ser Thr Leu Met Asp Gly Leu Glu Lys Tyr Trp Pro Ser Leu Ser Cys  
 100 105 110

Gly Ser Pro Ser Ser Cys Asn Gly Gly Lys Gly Ser Phe Trp Gly His  
 115 120 125

Glu Trp Glu Lys His Gly Thr Cys Ser Ser Pro Val Phe His Asp Glu  
 130 135 140

Tyr Asn Tyr Phe Leu Thr Thr Leu Asn Leu Tyr Leu Lys His Asn Val  
 145 150 155 160

Thr Asp Val Leu Tyr Gln Ala Gly Tyr Val Ala Ser Asn Ser Glu Lys  
 165 170 175

Tyr Pro Leu Gly Gly Ile Val Thr Ala Ile Gln Asn Ala Phe His Ile  
 180 185 190

Thr Pro Glu Val Val Cys Lys Arg Asp Ala Ile Asp Glu Ile Arg Ile  
 195 200 205

Cys Phe Tyr Lys Asp Phe Lys Pro Arg Asp Cys Val Gly Ser Gln Asp  
 210 215 220

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Leu Thr Ser Arg Lys Ser Cys Pro Lys Tyr Val Ser Leu Pro Glu Tyr  
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Thr Pro Leu Asp Gly Glu Ala Met Val Leu Lys Met Pro Thr Glu Arg  
245 250 255

Glu Ala Leu

<210> 2659

<211> 537

<212> DNA

<213> Arabidopsis thaliana

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<211> 178

<212> PRT

<213> Arabidopsis thaliana

<400> 2660

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20 25 30



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35 40 45

Lys Arg Gly Asp Ser Ser Val Val Arg Cys Ser Leu Glu Thr Val Asn  
50 55 60

Val Ser Val Gly Gln Val Thr Glu Val Asp Lys Asp Thr Phe Trp Pro  
65 70 75 80

Ile Val Lys Ala Ala Gly Glu Lys Leu Val Val Leu Asp Met Tyr Thr  
85 90 95

Gln Trp Cys Gly Pro Cys Lys Val Ile Ala Pro Lys Tyr Lys Ala Leu  
100 105 110

Ser Glu Lys Tyr Asp Asp Val Val Phe Leu Lys Leu Asp Cys Asn Pro  
115 120 125

Asp Asn Arg Pro Leu Ala Lys Glu Leu Gly Ile Arg Val Val Pro Thr  
130 135 140

Phe Lys Ile Leu Lys Asp Asn Lys Val Val Lys Glu Val Thr Gly Ala  
145 150 155 160

Lys Tyr Asp Asp Leu Val Ala Ala Ile Glu Thr Ala Arg Ser Ala Ala  
165 170 175

Ser Gly

<210> 2661

<211> 885

<212> DNA

<213> Arabidopsis thaliana

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 ccagaaaatt ggggtccggg ggcgaagcct agggtttcta tgttgaacta tgatgggtctc 840  
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<210> 2662

<211> 294

<212> PRT

<213> Arabidopsis thaliana

<400> 2662

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Ser Pro Glu Asp Phe Ser Val Asn Leu Asn Ala Gly Glu Asp Asp Gly  
 35 40 45

Asp Glu Asp Asp Asn Asn Asn Asn Ser Glu Asp Asn Lys Ala Phe Trp  
 50 55 60

Gln Glu His Glu Gln Leu Leu Gln Gly Thr Leu Tyr Arg Thr Ser Ser  
 65 70 75 80

Ile Glu Thr Lys Ile Arg Gln Ala Thr Lys Glu Ala Leu Lys Gln Val  
 85 90 95

Lys Ser Lys Gly Leu Tyr Cys Val Cys Arg Arg Pro Val Asp Gly Gly  
 100 105 110

Cys Arg Ser Cys Leu Arg Gly Glu Ile Ser Arg His Leu Arg Asp Val  
 115 120 125

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Ala Gly Tyr Asp Cys Val Ile Ser Lys Ser Lys Trp Arg Ser Cys Gln  
130 135 140

Asp Ile Pro Ala Gly Glu His Glu Phe Ile Glu Ile Val Asp Arg Ser  
145 150 155 160

Gly Ser Lys Lys Ser Glu Met Arg Val Val Ile Glu Leu Ser Phe Arg  
165 170 175

Ala Glu Phe Glu Ile Ala Lys Gly Ser Glu Glu Tyr Lys Arg Leu Ile  
180 185 190

Ser Arg Leu Pro Glu Val Tyr Val Gly Lys Thr Glu Arg Leu Arg Ser  
195 200 205

Leu Ile Lys Ile Leu Cys Ile Ala Gly Lys Lys Cys Leu Arg Asp Lys  
210 215 220

Lys Met His Met Ala Pro Trp Arg Lys His Lys Tyr Met Gln Ala Lys  
225 230 235 240

Trp Leu Gly Thr Cys Asp Arg Ser Ser Ser Leu Glu Ala Ser Val Ser  
245 250 255

Glu Ala Met Glu Pro Glu Asn Trp Val Pro Val Ala Lys Pro Arg Val  
260 265 270

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275 280 285

Ala Thr Val Ala Val Val  
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<211> 1557

<212> DNA

<213> Arabidopsis thaliana

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caaatgagct tcgtgtggtc cgctgcggtg tgggtcatag ctgtagccgc tgttgtgatt	180
agcaaatggt tataccgatg gtcgaaccg aagtgcaatg gcaagttacc accgggatca	240

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ataatggcgc acttgacccc aaagataata agtaacctca aaccagaaac acaagcaact 720  
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actttgattt ctatctacaa agtctttatt gcacgtagat acgcctcca ggtgataaag 840  
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<210> 2664

<211> 518

<212> PRT

<213> Arabidopsis thaliana

<400> 2664

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Leu Phe Lys Leu Gln Arg Gln Asn Gln Met Ser Phe Val Trp Ser Ala  
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 Tyr Arg Trp Ser Asn Pro Lys Cys Asn Gly Lys Leu Pro Pro Gly Ser  
 65 70 75 80  
 Met Gly Leu Pro Ile Ile Gly Glu Thr Cys Asp Phe Phe Glu Pro His  
 85 90 95  
 Gly Leu Tyr Glu Ile Ser Pro Phe Val Lys Lys Arg Met Leu Lys Tyr  
 100 105 110  
 Gly Pro Leu Phe Arg Thr Asn Ile Phe Gly Ser Asn Thr Val Val Leu  
 115 120 125  
 Thr Glu Pro Asp Ile Ile Phe Glu Val Phe Arg Gln Glu Asn Lys Ser  
 130 135 140  
 Phe Val Phe Ser Tyr Pro Glu Ala Phe Val Lys Pro Phe Gly Lys Glu  
 145 150 155 160  
 Asn Val Phe Leu Lys His Gly Asn Ile His Lys His Val Lys Gln Ile  
 165 170 175  
 Ser Leu Gln His Leu Gly Ser Glu Ala Leu Lys Lys Lys Met Ile Gly  
 180 185 190  
 Glu Ile Asp Arg Val Thr Tyr Glu His Leu Arg Ser Lys Ala Asn Gln  
 195 200 205  
 Gly Ser Phe Asp Ala Lys Glu Ala Val Glu Ser Val Ile Met Ala His  
 210 215 220  
 Leu Thr Pro Lys Ile Ile Ser Asn Leu Lys Pro Glu Thr Gln Ala Thr  
 225 230 235 240  
 Leu Val Asp Asn Ile Met Ala Leu Gly Ser Glu Trp Phe Gln Ser Pro  
 245 250 255  
 Leu Lys Leu Thr Thr Leu Ile Ser Ile Tyr Lys Val Phe Ile Ala Arg  
 260 265 270  
 Arg Tyr Ala Leu Gln Val Ile Lys Asp Val Phe Thr Arg Arg Lys Ala

275  
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 Phe Ala Ile Leu Val Val Ala Lys Glu Ser Thr Ser Ser Val Thr Ser  
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 355 360 365  
 Gly Val Ser Trp Glu Glu Tyr Arg His Gln Met Thr Phe Thr Asn Met  
 370 375 380  
 Val Ile Asn Glu Thr Leu Arg Met Ala Asn Met Ala Pro Ile Met Tyr  
 385 390 395 400  
 Arg Lys Ala Val Asn Asp Val Glu Ile Lys Gly Tyr Thr Ile Pro Ala  
 405 410 415  
 Gly Trp Ile Val Ala Val Ile Pro Pro Ala Val His Phe Asn Asp Ala  
 420 425 430  
 Ile Tyr Glu Asn Pro Leu Glu Phe Asn Pro Trp Arg Trp Glu Gly Lys  
 435 440 445  
 Glu Leu Arg Ser Gly Ser Lys Thr Phe Met Val Phe Gly Gly Gly Val  
 450 455 460  
 Arg Gln Cys Val Gly Ala Glu Phe Ala Arg Leu Gln Ile Ser Ile Phe  
 465 470 475 480  
 Ile His His Leu Val Thr Thr Tyr Asp Phe Ser Leu Ala Gln Glu Ser  
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 Glu Phe Ile Arg Ala Pro Leu Pro Tyr Phe Pro Lys Gly Leu Pro Ile  
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&lt;211&gt; 2301

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2665

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<211> 766

<212> PRT

<213> Arabidopsis thaliana

<400> 2666

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Gly Ala Leu Asp Ser Asp Ser Lys Val Tyr Ile Val Tyr Leu Gly Glu  
35 40 45

Arg Glu His Asp Asp Pro Glu Leu Val Thr Ala Ser His His Gln Met  
50 55 60

Leu Glu Ser Leu Leu Gln Ser Lys Glu Asp Ala Gln Asn Ser Leu Ile  
65 70 75 80

Tyr Ser Tyr Gln His Gly Phe Ser Gly Phe Ala Ala Leu Leu Thr Ser  
85 90 95



Ser Gln Ala Lys Lys Ile Ser Glu His Pro Glu Val Ile His Val Ile  
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 Pro Asn Arg Ile Arg Lys Leu Lys Thr Thr Arg Ala Trp Asp His Leu  
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 Gly Leu Ser Pro Ile Pro Thr Ser Phe Ser Ser Leu Ser Ser Val Lys  
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 Gly Leu Leu His Asp Thr Asn Leu Gly Ser Glu Ala Ile Ile Gly Val  
 145 150 155 160  
 Ile Asp Ser Gly Ile Trp Pro Glu Ser Lys Ala Val Asn Asp Gln Gly  
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 Leu Gly Pro Ile Pro Lys Arg Trp Arg Gly Lys Cys Glu Pro Gly Glu  
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 225 230 235 240  
 Thr His Thr Ala Thr Ile Ala Gly Gly Ser Phe Val Pro Asn Val Ser  
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 Tyr Phe Gly Leu Ala Gln Gly Leu Val Arg Gly Gly Ala Pro Arg Ala  
 260 265 270  
 Arg Ile Ala Ser Tyr Lys Ala Cys Trp Asn Val Met Arg Asp Glu Gly  
 275 280 285  
 Gly Gly Thr Asp Gly Arg Cys Thr Ser Ala Asp Met Trp Lys Ala Phe  
 290 295 300  
 Asp Asp Ala Ile His Asp Gly Val Asp Val Leu Ser Val Ser Ile Gly  
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Asn Glu Gly Pro Gly Ala His Thr Val Asp Asn Val Ala Pro Trp Leu  
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 385 390 395 400  
 Pro Glu Ile Ser Thr Gly Leu Ala Phe Leu Asp Ser Asp Ser Asp Asp  
 405 410 415  
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 485 490 495  
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 545 550 555 560  
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 565 570 575  
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Gly Gly Leu Val Asn Pro Glu Lys Ala Ala Lys Pro Gly Leu Val Tyr  
 610 615 620

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Asn Asp Ser Ser Ile Ser Arg Val Leu Gly Lys Lys Thr Asn Cys Pro  
 645 650 655

Ile Pro Lys Pro Ser Met Leu Asp Ile Asn Leu Pro Ser Ile Thr Ile  
 660 665 670

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 675 680 685

Gly Pro Ile Lys Ser Val Tyr Arg Ala Val Ile Glu Ser Pro Leu Gly  
 690 695 700

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 705 710 715 720

Lys Arg Val Leu Thr Phe Ser Val Lys Ala Lys Thr Ser His Lys Val  
 725 730 735

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<211> 552

<212> DNA

<213> Arabidopsis thaliana

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 cggatgaatc cccagcgttc gatgatggaa ttcacagct ccggcgccgc accaggccct 480  
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<210> 2668

<211> 183

<212> PRT

<213> Arabidopsis thaliana

<400> 2668

Met Ser Phe Ser Ser Leu Lys Leu Pro Ile Phe Leu Ile Leu Ser Ser  
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 Thr Asn Met Cys Ser Phe Ser Ile Ser Ala Ser Gly Lys Arg Cys Ile  
 35 40 45  
 Leu Glu Thr Ala Asn Val Ala Gly Glu Phe Thr Cys Arg Thr Ser Ala  
 50 55 60  
 Val Asp Val Glu Gly Ile Val Asn His Val Glu Thr Asp Glu Cys Val  
 65 70 75 80  
 Ser Ala Cys Gly Val Asp Arg Lys Thr Val Gly Ile Ser Ser Asp Ser  
 85 90 95  
 Leu Met Glu Ala Gly Phe Ala Ala Lys Leu Cys Ser Ser Ala Cys Leu  
 100 105 110  
 Asp Tyr Cys Pro Asn Ile Leu Asp Leu Tyr Phe Asn Leu Ala Ala Gly  
 115 120 125  
 Glu Gly Ala Phe Leu Pro Asp Leu Cys Asp Ala Gln Arg Met Asn Pro  
 130 135 140  
 Gln Arg Ser Met Met Glu Phe Ile Ser Ser Gly Ala Ala Pro Gly Pro  
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Val Ser Glu Ile Ala Pro Gly Pro Thr Ser Glu Glu Val Ser Ser Pro  
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Ala Leu Ala Pro Ala Ser Met  
 180

<210> 2669

<211> 1170

<212> DNA

<213> *Arabidopsis thaliana*

<400> 2669

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cctgata	accg	ttgaat	ggag	tggtc	ggatc	cagttt	catc	gtatca	atat	taagcat	gat	240
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ccaacg	gttg	atgttg	actc	caaag	agttt	tacggg	gaag	gttatg	atga	cagtgaca	ag	1020
agaatcc	cag	acatg	accat	catta	accgc	caactc	ggat	ggaaccc	gaa	aacatc	gcta	1080
tgggact	tg	tcgag	tcgac	cttaac	cttac	cagcac	agga	catacg	tga	agctgt	gaag	1140
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<210> 2670

<211> 389

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2670

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20 25 30Leu Cys Glu Lys Leu Leu Thr Glu Thr Pro His Lys Val Leu Ala Leu  
35 40 45Asp Val Tyr Asn Asp Lys Ile Lys His Leu Leu Glu Pro Asp Thr Val  
50 55 60Glu Trp Ser Gly Arg Ile Gln Phe His Arg Ile Asn Ile Lys His Asp  
65 70 75 80Ser Arg Leu Glu Gly Leu Val Lys Met Ala Asp Leu Ile Ile Asn Leu  
85 90 95Ala Ala Ile Cys Thr Pro Ala Asp Tyr Asn Thr Arg Pro Leu Asp Thr  
100 105 110Ile Tyr Ser Asn Phe Ile Asp Ala Leu Pro Val Val Lys Tyr Cys Ser  
115 120 125Glu Asn Asn Lys Arg Leu Ile His Phe Ser Thr Cys Glu Val Tyr Gly  
130 135 140Lys Thr Ile Gly Ser Phe Leu Pro Lys Asp His Pro Leu Arg Asp Asp  
145 150 155 160Pro Ala Phe Tyr Val Leu Lys Glu Asp Ile Ser Pro Cys Ile Phe Gly  
165 170 175Ser Ile Glu Lys Gln Arg Trp Ser Tyr Ala Cys Ala Lys Gln Leu Ile  
180 185 190Glu Arg Leu Val Tyr Ala Glu Gly Ala Glu Asn Gly Leu Glu Phe Thr  
195 200 205Ile Val Arg Pro Phe Asn Trp Ile Gly Pro Arg Met Asp Phe Ile Pro  
210 215 220

Gly Ile Asp Gly Pro Ser Glu Gly Val Pro Arg Val Leu Ala Cys Phe  
 225 230 235 240

Ser Asn Asn Leu Leu Arg Arg Glu Pro Leu Lys Leu Val Asp Gly Gly  
 245 250 255

Glu Ser Gln Arg Thr Phe Val Tyr Ile Asn Asp Ala Ile Glu Ala Val  
 260 265 270

Leu Leu Met Ile Glu Asn Pro Glu Arg Ala Asn Gly His Ile Phe Asn  
 275 280 285

Val Gly Asn Pro Asn Asn Glu Val Thr Val Arg Gln Leu Ala Glu Met  
 290 295 300

Met Thr Glu Val Tyr Ala Lys Val Ser Gly Glu Gly Ala Ile Glu Ser  
 305 310 315 320

Pro Thr Val Asp Val Ser Ser Lys Glu Phe Tyr Gly Glu Gly Tyr Asp  
 325 330 335

Asp Ser Asp Lys Arg Ile Pro Asp Met Thr Ile Ile Asn Arg Gln Leu  
 340 345 350

Gly Trp Asn Pro Lys Thr Ser Leu Trp Asp Leu Leu Glu Ser Thr Leu  
 355 360 365

Thr Tyr Gln His Arg Thr Tyr Ala Glu Ala Val Lys Lys Ala Thr Ser  
 370 375 380

Lys Pro Val Ala Ser  
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<210> 2671

<211> 585

<212> DNA

<213> Arabidopsis thaliana

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 cctaacacta aattctgtta ctacaacaat tacaatctgt cacagcccccg tcacttttgc 180

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accgtcgctg agaaacctga tcatcatggg tccgggctag aagaaaaaga agagagagtt      360
tcgggtcaag aaatgaatcc gacccgatg ttatacgggt taccagtgg agatccgaat      420
ggtgcgagtt ttagttcgtt gttggcgtcg aatatgcaga tgggtgggct tgtttacgag      480
tccgggtcgc gttggttacc aggtatggat ttgggtttgg gttcggtagc gaggagtgat      540
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&lt;210&gt; 2672

&lt;211&gt; 194

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2672

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Met Gln Asp Leu Thr Ser Ala Ala Ala Tyr Tyr His Gln Ser Met Met
1      5      10      15

```

```

Met Thr Thr Ala Lys Gln Asn Gln Pro Glu Leu Pro Glu Gln Glu Gln
      20      25      30

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```

Leu Lys Cys Pro Arg Cys Asp Ser Pro Asn Thr Lys Phe Cys Tyr Tyr
      35      40      45

```

```

Asn Asn Tyr Asn Leu Ser Gln Pro Arg His Phe Cys Lys Asn Cys Arg
      50      55      60

```

```

Arg Tyr Trp Thr Lys Gly Gly Ala Leu Arg Asn Ile Pro Val Gly Gly
      65      70      75      80

```

```

Gly Thr Arg Lys Ser Asn Lys Arg Ser Gly Ser Ser Pro Ser Ser Asn
      85      90      95

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```

Leu Lys Asn Gln Thr Val Ala Glu Lys Pro Asp His His Gly Ser Gly
      100      105      110

```

```

Ser Glu Glu Lys Glu Glu Arg Val Ser Gly Gln Glu Met Asn Pro Thr
      115      120      125

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```

Arg Met Leu Tyr Gly Leu Pro Val Gly Asp Pro Asn Gly Ala Ser Phe
      130      135      140

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Ser Ser Leu Leu Ala Ser Asn Met Gln Met Gly Gly Leu Val Tyr Glu  
145 150 155 160

Ser Gly Ser Arg Trp Leu Pro Gly Met Asp Leu Gly Leu Gly Ser Val  
165 170 175

Arg Arg Ser Asp Asp Thr Trp Thr Asp Leu Ala Met Asn Arg Met Glu  
180 185 190

Lys Asn

<210> 2673

<211> 588

<212> DNA

<213> Arabidopsis thaliana

<400> 2673  
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gtgggagtgat gatgcatggc tgagggagga cccacgaatg aagactcttc accagcacca 180  
tctacctcgg ccgctcagcc gttgccgaag tcaccatctc ctctcctcc tatgaaacct 240  
aagggtgagca caaagtttag cgacttgcta gcgttttagcg gtccagcacc agagaggatt 300  
aacggacggt tagcgatggt tggattcggt gcggcggttg ctgtcgagct atccaagggt 360  
gaaaacggtt tagctcagat ctccgacggt ggcgtctcat ggttcctcgg tacaacagcg 420  
atcttgacac ttgcgtcgtt tgtgccgctt ttcaagggca taagcggtga gtccaagttc 480  
aaaggtatca tgacgtcaga cgctgagctt tggaacggac gtttcgcat gctcgggttg 540  
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<210> 2674

<211> 195

<212> PRT

<213> Arabidopsis thaliana

<400> 2674

Met Ala Thr Ala Ser Phe Asn Met Gln Ser Val Phe Ala Gly Gly Leu  
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Thr Thr Arg Lys Ile Asn Thr Asn Lys Leu Phe Ser Ala Gly Ser Phe  
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Pro Asn Leu Lys Arg Asn Tyr Pro Val Gly Val Arg Cys Met Ala Glu  
35 40 45  
Gly Gly Pro Thr Asn Glu Asp Ser Ser Pro Ala Pro Ser Thr Ser Ala  
50 55 60  
Ala Gln Pro Leu Pro Lys Ser Pro Ser Pro Pro Pro Met Lys Pro  
65 70 75 80  
Lys Val Ser Thr Lys Phe Ser Asp Leu Leu Ala Phe Ser Gly Pro Ala  
85 90 95  
Pro Glu Arg Ile Asn Gly Arg Leu Ala Met Val Gly Phe Val Ala Ala  
100 105 110  
Leu Ala Val Glu Leu Ser Lys Gly Glu Asn Val Leu Ala Gln Ile Ser  
115 120 125  
Asp Gly Gly Val Ser Trp Phe Leu Gly Thr Thr Ala Ile Leu Thr Leu  
130 135 140  
Ala Ser Leu Val Pro Leu Phe Lys Gly Ile Ser Val Glu Ser Lys Ser  
145 150 155 160  
Lys Gly Ile Met Thr Ser Asp Ala Glu Leu Trp Asn Gly Arg Phe Ala  
165 170 175  
Met Leu Gly Leu Val Ala Leu Ala Phe Thr Glu Phe Val Lys Gly Gly  
180 185 190  
Thr Leu Val  
195

<210> 2675

<211> 1188

<212> DNA

<213> Arabidopsis thaliana

<400> 2675  
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tcttctctct ccaaacaagt cttcctctac cgtcgtcaac cacaacacaa ccgtagattc 120  
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tgcggcaaaa gtacctttat gcggaggctc accagcgtct ttggtggcgc tgctaagcca 240
ccaaaaggcg ggaaccctga ttccaacaca ctcatcagcg acacgaccac tgtgatctgt 300
cttgatgatt accattcttt ggataggtac ggtaggaaag agcagaaagt caccgctttg 360
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aacaacgcta ctgggtcttt ccaaaccatt gttggattga agatcagaga tctctatgag 1140
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<210> 2676

<211> 395

<212> PRT

<213> Arabidopsis thaliana

<400> 2676

Met Ala Val Ser Thr Ile Tyr Ser Thr Gln Ala Leu Asn Ser Thr His  
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Phe Leu Thr Ser Ser Ser Ser Ser Lys Gln Val Phe Leu Tyr Arg Arg  
20 25 30

Gln Pro Gln Thr Asn Arg Arg Phe Asn Thr Leu Ile Thr Cys Ala Gln  
35 40 45

Glu Thr Ile Val Ile Gly Leu Ala Ala Asp Ser Gly Cys Gly Lys Ser  
Page 3741

50

55

60

Thr Phe Met Arg Arg Leu Thr Ser Val Phe Gly Gly Ala Ala Lys Pro  
 65 70 75 80  
 Pro Lys Gly Gly Asn Pro Asp Ser Asn Thr Leu Ile Ser Asp Thr Thr  
 85 90 95  
 Thr Val Ile Cys Leu Asp Asp Tyr His Ser Leu Asp Arg Tyr Gly Arg  
 100 105 110  
 Lys Glu Gln Lys Val Thr Ala Leu Asp Pro Arg Ala Asn Asp Phe Asp  
 115 120 125  
 Leu Met Tyr Glu Gln Val Lys Ala Leu Lys Asn Gly Ile Ala Val Glu  
 130 135 140  
 Lys Pro Ile Tyr Asn His Val Thr Gly Leu Leu Asp Pro Pro Glu Leu  
 145 150 155 160  
 Ile Gln Pro Pro Lys Ile Leu Val Ile Glu Gly Leu His Pro Met Phe  
 165 170 175  
 Asp Glu Arg Val Arg Asp Leu Leu Asp Phe Ser Ile Tyr Leu Asp Ile  
 180 185 190  
 Ser Asn Glu Val Lys Phe Ala Trp Lys Ile Gln Arg Asp Met Ala Glu  
 195 200 205  
 Arg Gly His Ser Leu Glu Ser Ile Lys Ala Ser Ile Glu Ala Arg Lys  
 210 215 220  
 Pro Asp Phe Asp Ala Phe Ile Asp Pro Gln Lys Gln Tyr Ala Asp Ala  
 225 230 235 240  
 Val Ile Glu Val Leu Pro Thr Thr Leu Ile Pro Asp Asp Asn Glu Gly  
 245 250 255  
 Lys Val Leu Arg Val Arg Leu Ile Met Lys Glu Gly Val Lys Tyr Phe  
 260 265 270  
 Ser Pro Val Tyr Leu Phe Asp Glu Gly Ser Thr Ile Ser Trp Ile Pro  
 275 280 285  
 Cys Gly Arg Lys Leu Thr Cys Ser Tyr Pro Gly Ile Lys Phe Asn Tyr  
 290 295 300

Glu Pro Asp Ser Tyr Phe Asp His Glu Val Ser Val Leu Glu Met Asp  
 305 310 315 320

Gly Gln Phe Asp Arg Leu Asp Glu Leu Ile Tyr Val Glu Ser His Leu  
 325 330 335

Ser Asn Leu Ser Thr Lys Phe Tyr Gly Glu Val Thr Gln Gln Met Leu  
 340 345 350

Lys His Ala Asp Phe Pro Gly Ser Asn Asn Gly Thr Gly Leu Phe Gln  
 355 360 365

Thr Ile Val Gly Leu Lys Ile Arg Asp Leu Tyr Glu Gln Leu Ile Ala  
 370 375 380

Asn Lys Ala Thr Ala Arg Ala Glu Ala Lys Ala  
 385 390 395

<210> 2677

<211> 561

<212> DNA

<213> Arabidopsis thaliana

<400> 2677

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gactccaacg attcggattc ttctcagag actaccaca aagcccaggg agatcagaaa	180
tcagtgtcac ggagacagtg gatgacggca tgtgtgtgcg catctgcagc ttttaattagc	240
aattcttata cctttgtctc tgtacaaagc gcagccgctt tagacaagaa accaggaggt	300
tcattgtcga actgccaggg cagtgggtgct gttctttgtg atatgtgtgg tggtagagga	360
aaatggaag ctctcaaccg aaacacgtgc aaagatgtat atgagtttac ggaatgtcca	420
aactgttacg gtcgaggtaa gcttgtttgt ccggtctggt taggtacagg ttaccacaa	480
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cggcttcttc ctgattcatg a	561

<210> 2678

<211> 186

<212> PRT

<213> Arabidopsis thaliana

&lt;400&gt; 2678

Met Ala Ala Ser Ser Ser His Leu Phe Ala Leu Pro Ser Pro Ala Ser  
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 20 25 30

Ser Cys Pro Glu Asn Gln Ser Phe Asp Ser Asn Asp Ser Asp Ser Ser  
 35 40 45

Ser Glu Thr Thr His Lys Ala Gln Gly Asp Gln Lys Ser Val Ser Arg  
 50 55 60

Arg Gln Trp Met Thr Ala Cys Val Cys Ala Ser Ala Ala Leu Ile Ser  
 65 70 75 80

Asn Ser Tyr Thr Phe Val Ser Val Gln Ser Ala Ala Ala Leu Asp Lys  
 85 90 95

Lys Pro Gly Glu Ser Cys Arg Asn Cys Gln Gly Ser Gly Ala Val Leu  
 100 105 110

Cys Asp Met Cys Gly Gly Thr Gly Lys Trp Lys Ala Leu Asn Arg Lys  
 115 120 125

Arg Ala Lys Asp Val Tyr Glu Phe Thr Glu Cys Pro Asn Cys Tyr Gly  
 130 135 140

Arg Gly Lys Leu Val Cys Pro Val Cys Leu Gly Thr Gly Leu Pro Asn  
 145 150 155 160

Asn Lys Gly Leu Leu Arg Arg Pro Gly Ala Arg Glu Leu Leu Glu Lys  
 165 170 175

Met Tyr Asn Gly Arg Leu Leu Pro Asp Ser  
 180 185

&lt;210&gt; 2679

&lt;211&gt; 996

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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<400> 2679  
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 gcttgctcct gtaccgtttc ttgtgctgat attctcacc ttgcagcccg agagccgctc 420  
 gttttgaccg gtggacaacg ctgggaagtg cccttgggac gtctcgacgg ccgaatctcg 480  
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<210> 2680

<211> 331

<212> PRT

<213> Arabidopsis thaliana

<400> 2680

Met Gly Arg Gly Tyr Asn Leu Leu Phe Val Leu Val Thr Phe Leu Val  
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 20 25 30  
 Gly Gly Arg Arg Pro His Val Gly Phe Tyr Gly Asn Arg Cys Arg Asn  
 35 40 45  
 Val Glu Ser Ile Val Arg Ser Val Val Gln Ser His Val Arg Ser Ile  
 50 55 60

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Pro Ala Asn Ala Pro Gly Ile Leu Arg Met His Phe His Asp Cys Phe  
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 Val His Gly Cys Asp Gly Ser Val Leu Leu Ala Gly Asn Thr Ser Glu  
 85 90  
 Arg Thr Ala Val Pro Asn Arg Ser Leu Arg Gly Phe Glu Val Ile Glu  
 100 105 110  
 Glu Ala Lys Ala Arg Leu Glu Lys Ala Cys Pro Arg Thr Val Ser Cys  
 115 120  
 Ala Asp Ile Leu Thr Leu Ala Ala Arg Asp Ala Val Val Leu Thr Gly  
 130 135 140  
 Gly Gln Arg Trp Glu Val Pro Leu Gly Arg Leu Asp Gly Arg Ile Ser  
 145 150 155 160  
 Gln Ala Ser Asp Val Asn Leu Pro Gly Pro Ser Asp Ser Val Ala Lys  
 165 170 175  
 Gln Lys Gln Asp Phe Ala Ala Lys Thr Leu Asn Thr Leu Asp Leu Val  
 180 185 190  
 Thr Leu Val Gly Gly His Thr Ile Gly Thr Ala Gly Cys Gly Leu Val  
 195 200 205  
 Arg Gly Arg Phe Val Asn Phe Asn Gly Thr Gly Gln Pro Asp Pro Ser  
 210 215 220  
 Ile Asp Pro Ser Phe Val Pro Leu Ile Leu Ala Gln Cys Pro Gln Asn  
 225 230 235 240  
 Gly Gly Thr Arg Val Glu Leu Asp Glu Gly Ser Val Asp Lys Phe Asp  
 245 250 255  
 Thr Ser Phe Leu Arg Lys Val Thr Ser Ser Arg Val Val Leu Gln Ser  
 260 265 270  
 Asp Leu Val Leu Trp Lys Asp Pro Glu Thr Arg Ala Ile Ile Glu Arg  
 275 280 285  
 Leu Leu Gly Leu Arg Arg Pro Ser Leu Arg Phe Gly Thr Glu Phe Gly  
 290 295 300  
 Lys Ser Met Val Lys Met Ser Leu Ile Glu Val Lys Thr Gly Ser Asp  
 305 310 315 320



Gly Glu Ile Arg Arg Val Cys Ser Ala Ile Asn  
 325 330

<210> 2681

<211> 723

<212> DNA

<213> Arabidopsis thaliana

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<400> 2681
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ccatgcacta aatttttcag cacttctgga tgtccatttg gtgacaattg ccacttcttg    180
cactatgtgc ccggtgggta caatgctgca gcgcagatga caaatctccg accaccggtt    240
ttctcaagtt ccagaaatat gcaaggatct ggtggtcccg gcgcagatt ctcagggaga    300
ggagatccag gatcaggccc tgtttcaatc tttggtgctt ctacttccaa gatcagtgtg    360
gatgcttctt tagccggtgc catcattgga aaaggtggaa tccattccaa acagatatgc    420
cgtgaacacg gagcaaaatt atcgattaaa gatcatgaaa gagaccctaa cttgaagatt    480
atcgagctgg aaggaacatt tgaacagatc aatgtagcga gtgggatggt gagagagctt    540
atagggaggc ttggatcagt gaagaaacct caagggattg gtggtcctga agggaaacca    600
catcctggga gcaactacaa aaccaagatc tgtgataggt actctaaagg gaactgtaca    660
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tag                                                                    723

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<210> 2682

<211> 240

<212> PRT

<213> Arabidopsis thaliana

<400> 2682

Met Asp Ala Arg Lys Arg Gly Arg Pro Glu Ala Ala Ala Ser His Asn  
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Ser Asn Gly Gly Phe Lys Arg Ser Lys Gln Glu Met Glu Ser Ile Ser  
 20 25 30

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Thr Gly Leu Gly Ser Lys Ser Lys Pro Cys Thr Lys Phe Phe Ser Thr  
35 40 45

Ser Gly Cys Pro Phe Gly Asp Asn Cys His Phe Leu His Tyr Val Pro  
50 55 60

Gly Gly Tyr Asn Ala Ala Ala Gln Met Thr Asn Leu Arg Pro Pro Val  
65 70 75 80

Ser Gln Val Ser Arg Asn Met Gln Gly Ser Gly Gly Pro Gly Gly Arg  
85 90 95

Phe Ser Gly Arg Gly Asp Pro Gly Ser Gly Pro Val Ser Ile Phe Gly  
100 105 110

Ala Ser Thr Ser Lys Ile Ser Val Asp Ala Ser Leu Ala Gly Ala Ile  
115 120 125

Ile Gly Lys Gly Gly Ile His Ser Lys Gln Ile Cys Arg Glu Thr Gly  
130 135 140

Ala Lys Leu Ser Ile Lys Asp His Glu Arg Asp Pro Asn Leu Lys Ile  
145 150 155 160

Ile Glu Leu Glu Gly Thr Phe Glu Gln Ile Asn Val Ala Ser Gly Met  
165 170 175

Val Arg Glu Leu Ile Gly Arg Leu Gly Ser Val Lys Lys Pro Gln Gly  
180 185 190

Ile Gly Gly Pro Glu Gly Lys Pro His Pro Gly Ser Asn Tyr Lys Thr  
195 200 205

Lys Ile Cys Asp Arg Tyr Ser Lys Gly Asn Cys Thr Tyr Gly Asp Arg  
210 215 220

Cys His Phe Ala His Gly Glu Ser Glu Leu Arg Arg Ser Gly Ile Ala  
225 230 235 240

<210> 2683

<211> 897

<212> DNA

<213> Arabidopsis thaliana

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<400> 2683
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tgtgtcgagt attgctttaa gaaaatcgct gaagcaaagg ccagattcga gaagcagaac    120
actggattag ctaaaagtta cgagcagacg agggagccgc tcgatgataa aagaatagag    180
gaagatagtt cagaagaaga agaggaggaa gaggataacc aagaacctca agtagatgta    240
actcaactta cagggagaca aaagaagttg ttgagttga gacttaagat gaatgaagca    300
agaaaatcca atcagacgga tgtcgggagt gaaaagaaga aaatggaagc accaacagag    360
acaaaaggaa tctcaaaaca gaaatggttg gaggggaggga agaaaaagat tgggaaactt    420
cttgatgcta atgggtttaga tatgacacag gcttatatgc tcgatactca agaagcagct    480
gaatcaaaat acaaaaaatg ggaaaaggaa cctacgcctg cgggttgagg tgtctttaac    540
cagaagcagt tatacaacgc atacaagaaa cggacaaaga acattcaggt tgatctggag    600
gagtataaca gaatgagagc agctgatcca gagttttacc gtgaggcctc aagcttgcaa    660
tatgaaaagg ctccaaaaac ttcgcaagat aagatagata agatggcaaa agagctctta    720
gacagagagc aaaagcgaca agagtttagc agggaggagg agttccggga agagaaggat    780
atcgattcca tcaacgacag aaacgagcat ttcaacaaga aaatcgagcg tgcgtttggg    840
aaatacacgc tggagatcaa aaacaacttg gaacgaggaa ctgcattacc cgactaa    897

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<210> 2684

<211> 298

<212> PRT

<213> Arabidopsis thaliana

<400> 2684

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Met Val Ser Glu Arg Arg Val His Pro Asp Cys Ile Asn Ala Ser Asn
1      5      10
Pro Tyr His Glu Cys Val Glu Tyr Cys Phe Lys Lys Ile Ala Glu Ala
20     25     30
Lys Ala Arg Phe Glu Lys Gln Asn Thr Gly Leu Ala Lys Val His Glu
35     40     45
Gln Thr Arg Glu Pro Leu Asp Asp Lys Arg Ile Glu Glu Asp Ser Ser
50     55     60
Glu Glu Glu Glu Glu Glu Asp Asn Gln Glu Pro Gln Val Asp Val
65     70     75     80

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Thr Gln Leu Thr Gly Arg Gln Lys Lys Leu Phe Glu Leu Arg Leu Lys  
85 90 95

Met Asn Glu Ala Arg Lys Ser Asn Gln Thr Asp Val Gly Ser Glu Lys  
100 105 110

Lys Lys Met Glu Ala Pro Thr Glu Thr Lys Gly Ile Ser Lys Gln Lys  
115 120 125

Trp Leu Glu Gly Arg Lys Lys Lys Ile Gly Lys Leu Leu Asp Ala Asn  
130 135 140

Gly Leu Asp Met Thr Gln Ala Tyr Met Leu Asp Thr Gln Glu Ala Ala  
145 150 155 160

Glu Ser Lys Tyr Lys Lys Trp Glu Lys Glu Pro Thr Pro Ala Gly Trp  
165 170 175

Asp Val Phe Asn Gln Lys Thr Leu Tyr Asn Ala Tyr Lys Lys Arg Thr  
180 185 190

Lys Asn Ile Gln Val Asp Leu Glu Glu Tyr Asn Arg Met Arg Ala Ala  
195 200 205

Asp Pro Glu Phe Tyr Arg Glu Ala Ser Ser Leu Gln Tyr Gly Lys Ala  
210 215 220

Pro Lys Thr Ser Gln Asp Lys Ile Asp Lys Met Ala Lys Glu Leu Leu  
225 230 235 240

Asp Arg Glu Gln Lys Arg Gln Glu Phe Ser Arg Arg Arg Lys Phe Arg  
245 250 255

Glu Glu Lys Asp Ile Asp Ser Ile Asn Asp Arg Asn Glu His Phe Asn  
260 265 270

Lys Lys Ile Glu Arg Ala Phe Gly Lys Tyr Thr Leu Glu Ile Lys Asn  
275 280 285

Asn Leu Glu Arg Gly Thr Ala Leu Pro Asp  
290 295

<210> 2685

<211> 954

<212> DNA

<213> *Arabidopsis thaliana*

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<400> 2685
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aggaacgcag cacaacgcag cttgatccgc agcgtttatg cagctaccta caatgaggat   180
cttctcaaa g cattagacaa agagctttct agcgactttg agagagctgt gatgttgtgg   240
actcttgatc caccagagag agatgcttat ttggctaag aatccaccaa gatgttcacc   300
aagaacaatt gggttcttgt tgaatcgct tgcacaaggc ctgctcttga gcttatcaag   360
gtcaagcaag cttaccaagc tcgatacaag aaatcaatcg aggaagatgt cgcgcaacac   420
acatctgggt accttcgtaa gctcttgctt cctcttgtag gcactttcag gtatgaagga   480
gatgatgtga acatgatgct tgcaagatct gaagctaaga tacttcacga gaaggtctca   540
gagaatcttt acagtgcagc tgacttcctc agaatcttga caacaagaag caaagcacag   600
ctcggtgcaa cactcaacca ctacaacaac gagtatggaa acgccattaa caagaacttg   660
aaggaagagt cggacgacaa tgactacatg aaactactaa gagctgtaac cacatgtttg   720
acataccctg agaagcattt tgagaagggt cttcgtctat caatcaacaa aatgggaaca   780
gacgaatggg gactaaccgc agtcgtgact acacgaactg aagttgacat ggaacgcatac   840
aaagaggaat atcagcgaag aaacagcatt cctttggacc gtgctatcgc caaagacact   900
tctggtgact atgaggacat gcttgttgct cttctcggac atggcgatgc ttga   954

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&lt;210&gt; 2686

&lt;211&gt; 317

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2686

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Met Ala Ser Leu Lys Val Pro Ser Asn Val Pro Leu Pro Glu Asp Asp
1           5           10           15

```

```

Ala Glu Gln Leu His Lys Ala Phe Ser Gly Trp Gly Thr Asn Glu Lys
20           25           30

```

```

Leu Ile Ile Ser Ile Leu Ala His Arg Asn Ala Ala Gln Arg Ser Leu
35           40           45

```

```

Ile Arg Ser Val Tyr Ala Ala Thr Tyr Asn Glu Asp Leu Leu Lys Ala
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```

50

55

60

Leu Asp Lys Glu Leu Ser Ser Asp Phe Glu Arg Ala Val Met Leu Trp  
 65 70 75 80  
 Thr Leu Asp Pro Pro Glu Arg Asp Ala Tyr Leu Ala Lys Glu Ser Thr  
 85 90 95  
 Lys Met Phe Thr Lys Asn Asn Trp Val Leu Val Glu Ile Ala Cys Thr  
 100 105 110  
 Arg Pro Ala Leu Glu Leu Ile Lys Val Lys Gln Ala Tyr Gln Ala Arg  
 115 120 125  
 Tyr Lys Lys Ser Ile Glu Glu Asp Val Ala Gln His Thr Ser Gly Asp  
 130 135 140  
 Leu Arg Lys Leu Leu Leu Pro Leu Val Ser Thr Phe Arg Tyr Glu Gly  
 145 150 155 160  
 Asp Asp Val Asn Met Met Leu Ala Arg Ser Glu Ala Lys Ile Leu His  
 165 170 175  
 Glu Lys Val Ser Glu Lys Ser Tyr Ser Asp Asp Asp Phe Ile Arg Ile  
 180 185 190  
 Leu Thr Thr Arg Ser Lys Ala Gln Leu Gly Ala Thr Leu Asn His Tyr  
 195 200 205  
 Asn Asn Glu Tyr Gly Asn Ala Ile Asn Lys Asn Leu Lys Glu Glu Ser  
 210 215 220  
 Asp Asp Asn Asp Tyr Met Lys Leu Leu Arg Ala Val Ile Thr Cys Leu  
 225 230 235 240  
 Thr Tyr Pro Glu Lys His Phe Glu Lys Val Leu Arg Leu Ser Ile Asn  
 245 250 255  
 Lys Met Gly Thr Asp Glu Trp Gly Leu Thr Arg Val Val Thr Thr Arg  
 260 265 270  
 Thr Glu Val Asp Met Glu Arg Ile Lys Glu Glu Tyr Gln Arg Arg Asn  
 275 280 285  
 Ser Ile Pro Leu Asp Arg Ala Ile Ala Lys Asp Thr Ser Gly Asp Tyr  
 290 295 300

Glu Asp Met Leu Val Ala Leu Leu Gly His Gly Asp Ala  
 305 310 315

<210> 2687

<211> 549

<212> DNA

<213> Arabidopsis thaliana

<400> 2687

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tccgtcgcgg ctaaccgccca cctgctttcg ttaagctccg gtgctagaag aaccagaaaa	180
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agtacgggtc tcgaatcagc ccagccggtt ttggttgaat tcgtcgtac ttggtgcggt	300
ccctgcaaat tgatctatcc agctatggaa gccttatctc aggaatatgg tgacaaattg	360
acgattgtaa agattgatca cgacgctaata ccaaagttaa tagcggagtt caagggttat	420
ggtttaccgc atttcattct cttcaaggac gggaaggaag ttccagggag cagaagggaa	480
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gttgcttaa	549

<210> 2688

<211> 182

<212> PRT

<213> Arabidopsis thaliana

<400> 2688

Met Asp Ser Ile Val Ser Ser Ser Thr Ile Leu Met Arg Ser Tyr Leu	
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20 25 30	
Pro Leu Ser Ser Val Gln Val Thr Ser Val Ala Ala Asn Arg His Leu	
35 40 45	
Leu Ser Leu Ser Ser Gly Ala Arg Arg Thr Arg Lys Ser Ser Ser Ser	
50 55 60	

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Val Ile Arg Cys Gly Gly Ile Lys Glu Ile Gly Glu Ser Glu Phe Ser  
65 70 75 80

Ser Thr Val Leu Glu Ser Ala Gln Pro Val Leu Val Glu Phe Val Ala  
85 90 95

Thr Trp Cys Gly Pro Cys Lys Leu Ile Tyr Pro Ala Met Glu Ala Leu  
100 105 110

Ser Gln Glu Tyr Gly Asp Lys Leu Thr Ile Val Lys Ile Asp His Asp  
115 120 125

Ala Asn Pro Lys Leu Ile Ala Glu Phe Lys Val Tyr Gly Leu Pro His  
130 135 140

Phe Ile Leu Phe Lys Asp Gly Lys Glu Val Pro Gly Ser Arg Arg Glu  
145 150 155 160

Gly Ala Ile Thr Lys Ala Lys Leu Lys Glu Tyr Ile Asp Gly Leu Leu  
165 170 175

Asn Ser Ile Ser Val Ala  
180

<210> 2689

<211> 528

<212> DNA

<213> Arabidopsis thaliana

<400> 2689  
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tgtggtcagg aggcgatttt ggaagagctt aggatttggt taccacaaat gggttacaca 120  
gaacaagtca cagatatgat tagagggaca ttaggaata tagtcgaat ttgtgataat 180  
ttttacgagc acgagactaa attctatgag caagtttctg ctgttatatc ttctacttct 240  
agagatggaa ttagtttcgag taaccacgat gcatttggtt cgaacttggg gtttattcac 300  
tgtgaacacag agcggagtga aagttgtcag ccatgcagc ttcaacagct taagagcatg 360  
agtagttcac agaagagcag tatttctcct gtgaagagga acagaaagat taaaggtaaa 420  
ccaaagaaga aaggaaaagc ttcttctaag gtagaatctg gaggcccaaa gcaagcttca 480  
ataactaaat tcttcaacaa agtttcttca gaaggaacca agtcttag 528



&lt;210&gt; 2690

&lt;211&gt; 175

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2690

Met Gly Asp Gln Ser Ile Ser Asn Lys Pro Leu Asp Glu Lys Val Ser  
 1 5 10 15

Met Asp Leu Thr Cys Gly Gln Glu Ala Ile Leu Glu Glu Leu Arg Ile  
 20 25 30

Cys Leu Pro Lys Trp Val Thr Gln Glu Gln Val Thr Asp Met Ile Arg  
 35 40 45

Gly Thr Cys Arg Asn Ile Val Glu Ile Val Asp Asn Phe Tyr Glu His  
 50 55 60

Glu Thr Lys Phe Tyr Glu Gln Val Ser Ala Val Ile Ser Phe Thr Ser  
 65 70 75 80

Arg Asp Gly Ile Ser Ser Ser Asn His Asp Ala Phe Val Ser Lys Leu  
 85 90 95

Glu Phe Ile His Cys Glu Thr Glu Arg Ser Glu Ser Cys Gln Pro Ser  
 100 105 110

Gln Phe His Lys Leu Lys Ser Met Ser Ser Ser Gln Lys Ser Ser Ile  
 115 120 125

Ser Pro Val Lys Arg Asn Arg Lys Ile Lys Gly Lys Pro Lys Lys Lys  
 130 135 140

Gly Lys Ala Ser Ser Lys Val Glu Ser Gly Gly Pro Lys Gln Ala Ser  
 145 150 155 160

Ile Thr Lys Phe Phe Asn Lys Val Ser Ser Glu Gly Thr Lys Ser  
 165 170 175

&lt;210&gt; 2691

&lt;211&gt; 717

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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 aaaaatgctc gcttcttctc tgaaggacga gccattggtg ctgcggcagc ggtttcggcg 120  
 tcaggaaaaa ttcctttgta tgcatctaac ttgcaagat catcagggtc tgggtgtgct 180  
 tctaagagtt ggatcactgg actcttagct ctctctgctg cagcttatat gattcaagat 240  
 caagagggtc ttgctgctga gatggaacga actttttatt ctatcaagcc tgatggtgtg 300  
 caaaggaggc tgatatcaga gatcatttct cgattcgaac gcaagggatt caagctagtt 360  
 ggtatcaaa gtcattgttcc ttctaaagat ttgcacaaa agcattacca tgatcttaag 420  
 gaaagacctt tcttcaatgg tttgtgtgac ttcttagct ctggctctgt tattgccatg 480  
 gtctgggaag gagatggtgt gatcagatac ggacgtaaac tgattggagc cactgatcct 540  
 cagaatctg agcctggaac aatccgagga gatcttgcat ttactgttgg caggaacata 600  
 atccatggaa gtgatggacc agagactgca aaggatgaga tcagctctgt gttaaagcct 660  
 caagaacttg tttcttacac tagtaactct gagaagtggc tctatggtga caactaa 717

<210> 2692

<211> 238

<212> PRT

<213> *Arabidopsis thaliana*

<400> 2692

Met Ser Ser Gln Ile Cys Arg Ser Ala Ser Lys Ala Ala Lys Ser Leu  
 1 5 10 15

Leu Ser Ser Ala Lys Asn Ala Arg Phe Phe Ser Glu Gly Arg Ala Ile  
 20 25 30

Gly Ala Ala Ala Ala Val Ser Ala Ser Gly Lys Ile Pro Leu Tyr Ala  
 35 40 45

Ser Asn Phe Ala Arg Ser Ser Gly Ser Gly Val Ala Ser Lys Ser Trp  
 50 55 60

Ile Thr Gly Leu Leu Ala Leu Pro Ala Ala Ala Tyr Met Ile Gln Asp  
 65 70 75 80

Gln Glu Val Leu Ala Ala Glu Met Glu Arg Thr Phe Ile Ala Ile Lys  
 85 90 95

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Pro Asp Gly Val Gln Arg Gly Leu Ile Ser Glu Ile Ile Ser Arg Phe  
100 105 110  
Glu Arg Lys Gly Phe Lys Leu Val Gly Ile Lys Val Ile Val Pro Ser  
115 120 125  
Lys Asp Phe Ala Gln Lys His Tyr His Asp Leu Lys Glu Arg Pro Phe  
130 135 140  
Phe Asn Gly Leu Cys Asp Phe Leu Ser Ser Gly Pro Val Ile Ala Met  
145 150 155 160  
Val Trp Glu Gly Asp Gly Val Ile Arg Tyr Gly Arg Lys Leu Ile Gly  
165 170 175  
Ala Thr Asp Pro Gln Lys Ser Glu Pro Gly Thr Ile Arg Gly Asp Leu  
180 185 190  
Ala Val Thr Val Gly Arg Asn Ile Ile His Gly Ser Asp Gly Pro Glu  
195 200 205  
Thr Ala Lys Asp Glu Ile Ser Leu Trp Phe Lys Pro Gln Glu Leu Val  
210 215 220  
Ser Tyr Thr Ser Asn Ser Glu Lys Trp Leu Tyr Gly Asp Asn  
225 230 235

<210> 2693

<211> 1464

<212> DNA

<213> Arabidopsis thaliana

<400> 2693

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gatttctctg cttcttctat gcccagaagg gcacgagttg tatctgctgt tagtcagagt	180
acaacagttc ttgatttgtc tgggaagaag agtggtgac gaaccaagct accaccaaga	240
agactttcga ttccaacaa gcccacaa gc aattcttctg ttaaatcagt gaggcagcgc	300
gtcacttctc tttctgaagt caagccaaag agatcacgca ttgttcttag aagcttcaat	360
gaaacaacaa cacctgtctc tagtaatctc agatcatcag tgactcgaaa gaaagttgaa	420

gacttgtctt cctctactta ttggctgact catatcaagc tagctgaatc cgtggcgaaa	480
cattcgatct ctctcgggtt ctttaaactt gctcttcatg caggggtgtga gccacttgac	540
aagatgaaag aagagttgaa attgtatgct cgtcgcaata acatggatgg gcttgctgat	600
gctatgaagg aactttcgga actgtacaat atctctgaag aatccaatca ggtgcaggtc	660
tcggagacta gttctgttgt agctgaagaa acagctatgt ctctgaacaa cgataatgat	720
gtccagagtt cattctccac tcctggaaat tcgaacatca catcagagat cacgaaagac	780
gatgctttgc aagattcaac cgtcacaaaa acaactaagg aaaaagatgc tttgcaagat	840
tcattctgtca cagaaacaac taaggaaaaa gatgctttgc aagattcatc tgtcacagaa	900
acatctaagg aagaagggtc tttgcaagat tcattctgtca cagaacaac taaggaaagaa	960
gatgctttgc aagattcatc tgtcacagaa acaactaagg aagagcaggc gttgaaaact	1020
gtaacacaag gaagaactag aaagtctctg gaggtaatca atgtgaacca agagaatgat	1080
tcagagggtg ttcaagaaac cgaagaaggg ctccgtccat cagcagatgg tgttcagatc	1140
gtgactgttg ttaaaccttc agacaagaaa cgtgccagaa aggagactgt tcctaagaac	1200
aacctgccgg tgaggacaaa gaaatcacta gcaaccaact ctgctaattc aaaaacagtt	1260
caagtaaca aggatgataa gtctcagaag aagtctgaga ggatcactaa acccaggact	1320
aagagagttc aagaagagtc aaagaagtca attaagaat ctactgctaa agaaggtgaa	1380
gttaaattct tgaagcaaac agagaaaatg gagaacaaag aaaacacggt tgttgtgtgt	1440
gcaggagaag acatccaggt ttaa	1464

&lt;210&gt; 2694

&lt;211&gt; 487

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2694

Met	Glu	Lys	Ser	Met	Glu	Lys	Ser	Val	Ser	Ser	Ala	Ala	Ser	Gly	Asn
1				5					10					15	

Ser	Ile	Asn	Ser	Lys	Leu	Arg	Tyr	Pro	Leu	Arg	Ser	Ala	Leu	Arg	Ser
			20					25					30		

Lys	Glu	Gly	Lys	Pro	Pro	Val	Pro	Asp	Phe	Ser	Ala	Ser	Ser	Met	Pro
		35					40					45			

Arg	Arg	Ala	Arg	Val	Val	Ser	Ala	Val	Ser	Gln	Ser	Thr	Thr	Val	Leu
		50				55					60				

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Asp Leu Ser Gly Lys Lys Ser Val Asp Arg Thr Lys Leu Pro Pro Arg  
 65 70 75 80  
 Arg Leu Ser Ile Pro Asn Lys Pro Thr Ser Asn Ser Ser Val Lys Ser  
 85 90 95  
 Val Ser Ser Ser Val Thr Ser Leu Ser Glu Val Lys Pro Lys Arg Ser  
 100 105 110  
 Arg Ile Val Pro Arg Ser Phe Asn Glu Thr Thr Thr Pro Val Ser Ser  
 115 120 125  
 Asn Leu Arg Ser Ser Val Thr Arg Lys Lys Val Glu Asp Leu Ser Ser  
 130 135 140  
 Ser Thr Tyr Trp Leu Thr His Ile Lys Leu Ala Glu Ser Val Ala Lys  
 145 150 155 160  
 His Ser Ile Ser Leu Gly Phe Phe Lys Leu Ala Leu His Ala Gly Cys  
 165 170 175  
 Glu Pro Leu Asp Lys Met Lys Glu Glu Leu Lys Leu Tyr Ala Arg Arg  
 180 185 190  
 Asn Asn Met Asp Gly Leu Ala Asp Ala Met Lys Glu Leu Ser Glu Leu  
 195 200 205  
 Tyr Asn Ile Ser Glu Glu Ser Asn Gln Val Gln Val Ser Glu Thr Ser  
 210 215 220  
 Ser Val Val Ala Glu Glu Thr Ala Met Ser Leu Asn Asn Asp Asn Asp  
 225 230 235 240  
 Val Gln Ser Ser Phe Ser Thr Pro Gly Asn Ser Asn Ile Thr Ser Glu  
 245 250 255  
 Ile Thr Lys Asp Asp Ala Leu Gln Asp Ser Thr Val Thr Lys Thr Thr  
 260 265 270  
 Lys Glu Lys Asp Ala Leu Gln Asp Ser Ser Val Thr Glu Thr Thr Lys  
 275 280 285  
 Glu Lys Asp Ala Leu Gln Asp Ser Ser Val Thr Glu Thr Ser Lys Glu  
 290 295 300  
 Glu Gly Ala Leu Gln Asp Ser Ser Val Thr Glu Thr Thr Lys Glu Glu  
 305 310 315 320 325 330 335 340 345 350 355 360 365 370 375 380 385 390 395 400

305 310 315 320

Asp Ala Leu Gln Asp Ser Ser Val Thr Glu Thr Thr Lys Glu Glu Gln  
325 330 335

Ala Leu Glu Thr Val Thr Gln Gly Arg Thr Arg Lys Ser Leu Glu Val  
340 345 350

Ile Asn Val Asn Gln Glu Asn Asp Ser Glu Val Val Gln Glu Ser Glu  
355 360 365

Glu Gly Leu Arg Pro Ser Ala Asp Gly Val Gln Ile Val Thr Val Val  
370 375 380

Lys Pro Ser Asp Lys Lys Arg Ala Arg Lys Glu Thr Val Pro Lys Asn  
385 390 395 400

Asn Leu Pro Val Arg Thr Lys Lys Ser Leu Ala Thr Asn Ser Ala Asn  
405 410 415

Ser Lys Thr Val Gln Val Asn Lys Asp Asp Lys Ser Gln Lys Lys Ser  
420 425 430

Glu Arg Ile Thr Lys Pro Arg Thr Lys Arg Val Gln Glu Glu Ser Lys  
435 440 445

Lys Ser Ile Lys Lys Ser Thr Ala Lys Glu Gly Glu Val Lys Ser Leu  
450 455 460

Lys Gln Thr Glu Lys Met Glu Asn Lys Glu Asn Thr Val Val Val Gly  
465 470 475 480

Ala Gly Glu Asp Ile Gln Val  
485

<210> 2695

<211> 921

<212> DNA

<213> Arabidopsis thaliana

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gaaacagaac aagaatcttc atcatcaccg tcttcttctt ctcatgttg acagaaacga 180

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tgaggatgg agacatttac acaccctgtg tgcggtattc ttgtgtttgc atcagtcctc	360
ttattccctg tgatacttat tccaactacg ccgtcaatgt ggggtggtgg gattacattt	420
ggttatttct atggccttct ctttactctt ccagctgtag ctattggtgt ttcacttcct	480
tacttcatca gctatctctt cctcaacaaa attcaagggt ggtagaag ataccagat	540
caagctgcaa tgttgagagc tgctggtgga ggcagttggt ttcacagtt tcgtgcagtt	600
accttaatcc ggatttctcc atttcctttt gctgtatata attactgcgc tgttgcaact	660
cgtgtgaagt tcggtcctta catggctggt tctctcgtag gcatggcgcc ggagattttt	720
gtcgcaattt atacagggat tcttataagg acattggcag atgcatccac tgcggaacaa	780
aagggtctct cgattcttca aattgttctc aacatttttg gttttgtagc aactgtttg	840
acaactgttc tcactactaa gtatgcgaaa agacagcttg aagttatgaa gaaggagaag	900
gaagctttgt tgttacagta a	921

<210> 2696

<211> 306

<212> PRT

<213> Arabidopsis thaliana

<400> 2696

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Glu Asp Phe Glu Val His Arg Gln Glu Thr Glu Gln Glu Ser Ser Ser	
35	40 45
Ser Pro Ser Ser Ser Ser Ser Cys Gly Gln Lys Arg Ser Val Trp Phe	
50	55 60
Trp Ile Lys Leu Gly Leu Phe Phe Thr Phe Leu Thr Ala Leu Gly Leu	
65	70 75 80
Ala Gly Tyr Lys Trp Leu Tyr Pro Leu Ile Met Asp Lys Glu Leu Ile	
85	90 95

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Pro Leu Ile Lys Trp Glu Met Glu Thr Phe Thr His Pro Val Cys Gly  
100 105 110

Ile Leu Val Phe Ala Ser Val Ser Leu Phe Pro Val Ile Leu Ile Pro  
115 120 125

Thr Thr Pro Ser Met Trp Val Ala Gly Ile Thr Phe Gly Tyr Phe Tyr  
130 135 140

Gly Leu Leu Leu Thr Leu Pro Ala Val Ala Ile Gly Val Ser Leu Pro  
145 150 155 160

Tyr Phe Ile Ser Tyr Leu Phe Leu Asn Lys Ile Gln Gly Trp Leu Glu  
165 170 175

Arg Tyr Pro Asp Gln Ala Ala Met Leu Arg Ala Ala Gly Gly Gly Ser  
180 185 190

Trp Phe His Gln Phe Arg Ala Val Thr Leu Ile Arg Ile Ser Pro Phe  
195 200 205

Pro Phe Ala Val Tyr Asn Tyr Cys Ala Val Ala Thr Arg Val Lys Phe  
210 215 220

Gly Pro Tyr Met Ala Gly Ser Leu Val Gly Met Ala Pro Glu Ile Phe  
225 230 235 240

Val Ala Ile Tyr Thr Gly Ile Leu Ile Arg Thr Leu Ala Asp Ala Ser  
245 250 255

Thr Ala Glu Gln Lys Gly Leu Ser Ile Leu Gln Ile Val Leu Asn Ile  
260 265 270

Phe Gly Phe Val Ala Thr Val Val Thr Thr Val Leu Ile Thr Lys Tyr  
275 280 285

Ala Lys Arg Gln Leu Glu Val Met Lys Lys Glu Lys Glu Ala Leu Leu  
290 295 300

Leu Gln  
305

<210> 2697

<211> 270

<212> DNA



&lt;213&gt; Arabidopsis thaliana

<400> 2697  
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 acattatcag acaaagcgta cgagatagct ttgagccaga ttagaacaa tcgtgaagcc 120  
 atggacaaga ttgttgaaat acttcttgag aaagagacta tgtcaggcga tgaattccga 180  
 gcaatcctat ctgaattcac agaaatccca cctgaaaacc gtgttgcttc ttcaacatcc 240  
 acatcaacac caacaccagc gtctgtctga 270

&lt;210&gt; 2698

&lt;211&gt; 89

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2698

Met Met Ala Arg Asn Ser Met Ser Glu Lys Leu Ala Asn Asp Ile Asp  
 1 5 10 15

Thr Ala Val Lys Thr Leu Ser Asp Lys Ala Tyr Glu Ile Ala Leu Ser  
 20 25 30

Gln Ile Arg Asn Asn Arg Glu Ala Met Asp Lys Ile Val Glu Ile Leu  
 35 40 45

Leu Glu Lys Glu Thr Met Ser Gly Asp Glu Phe Arg Ala Ile Leu Ser  
 50 55 60

Glu Phe Thr Glu Ile Pro Pro Glu Asn Arg Val Ala Ser Ser Thr Ser  
 65 70 75 80

Thr Ser Thr Pro Thr Pro Ala Ser Val  
 85

&lt;210&gt; 2699

&lt;211&gt; 477

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2699

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 gcagagaaag agaaacagag cacacagggc aagtctgatg gggaagcatc accagctgca 180  
 accaaaaacc ctaaaaccct cccaagaaa ccggtttact cgatgaagaa gggccaaatc 240  
 gttcgtgtgg aaaaagagaa gtacctcaac agcatcaatt acttatcagt tggacatcct 300  
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 gtctttgaga caggagagta tgcacttggt ggatgggttg gtatccccac cgcaccagct 420  
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<210> 2700

<211> 158

<212> PRT

<213> Arabidopsis thaliana

<400> 2700

Met Ala Phe Ser Ala Thr Val Ser Gln Leu Ser Ser Leu Ser Thr Ile  
 1 5 10 15

Ser Ser Ser Leu Pro Ile Ser Ser Arg Arg Leu Pro His Arg Ser Leu  
 20 25 30

Pro Gln Phe Thr Val Lys Ala Glu Ala Glu Lys Glu Lys Gln Ser Thr  
 35 40 45

Gln Gly Lys Ser Asp Gly Glu Ala Ser Pro Ala Ala Thr Lys Thr Pro  
 50 55 60

Lys Thr Leu Pro Lys Lys Pro Val Tyr Ser Met Lys Lys Gly Gln Ile  
 65 70 75 80

Val Arg Val Glu Lys Glu Lys Tyr Leu Asn Ser Ile Asn Tyr Leu Ser  
 85 90 95

Val Gly His Pro Pro Phe Tyr Lys Gly Leu Asp Tyr Ile Tyr Glu Asp  
 100 105 110

Arg Gly Glu Val Leu Asp Leu Arg Val Phe Glu Thr Gly Glu Tyr Ala  
 115 120 125

Leu Val Gly Trp Val Gly Ile Pro Thr Ala Pro Ala Trp Leu Pro Thr  
 130 135 140

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Asp Met Leu Ile Lys Cys Glu Lys Leu Val Tyr Glu Arg Met  
145 150 155

<210> 2701

<211> 183

<212> DNA

<213> Arabidopsis thaliana

<400> 2701  
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acagttcacc agacggttgc agcggttgac gctcccgcgc ctaccctac ctccgatgct 120  
tcctcattta tcctactttt cttcgctcc gtagcggta tggcctttgg attcttcttt 180  
taa 183

<210> 2702

<211> 60

<212> PRT

<213> Arabidopsis thaliana

<400> 2702  
Met Glu Ala Met Lys Met Lys Leu Tyr Val Val Val Leu Val Ala Val  
1 5 10 15  
Ile Ala Phe Ser Thr Val His Gln Thr Val Ala Ala Val Asp Ala Pro  
20 25 30  
Ala Pro Ser Pro Thr Ser Asp Ala Ser Ser Phe Ile Pro Thr Phe Phe  
35 40 45  
Ala Ser Val Ala Val Met Ala Phe Gly Phe Phe Phe  
50 55 60

<210> 2703

<211> 1299

<212> DNA

<213> Arabidopsis thaliana

<400> 2703  
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 acagagcaag ctgctctata ctctaccatt caaggctttg ttggtgaatc ttggaatggc 180  
 tcttatcttt atcctgaccc ttgtggctgg actcctatcc aggggtgtgac ttgtgatatc 240  
 tatgatgagc ttggttatgt aactgctcta agctttggga ctatgaaaga caactctctt 300  
 gcttgttctg aaagtccagt gatcagacca caactctttg agctcaagca cctcaagtct 360  
 ctctctcttt tcaactgctt cacaacgcct aaccgatatc tagcttcaat ctccgatgaa 420  
 aagtgtttg atctctctaa aagcttgagg agacttgaga tcagatcaaa cccgggactg 480  
 ataggtgaac tcccttctgt catcactaac ctcaccaacc ttcaatctct ggtgtgtgcta 540  
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 ttagtactgt ctggaaacgg gttcacaggg agaatacctg aggtctacgg gtaaccgga 660  
 ttgttgatat tggatgtgag caggaatttc ttatctgggg cgttgccctt aagcgttgga 720  
 ggattgtatt ctctgctgaa acttgatctt agtaacaatt acttggaagg aaagtacct 780  
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 gtgaaccaat gtaagagaat taaggcagat aaatattag 1299

<210> 2704

<211> 432

<212> PRT

<213> *Arabidopsis thaliana*

<400> 2704

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Cys Val Trp Cys Leu Val Val Asp Trp Ser Lys Ala Glu Thr Glu Glu  
 20 25 30  
 Ser Asp Gly Ser Pro Met Glu Lys Thr Glu Gln Ala Ala Leu Tyr Ser  
 35 40 45  
 Thr Ile Gln Gly Phe Val Gly Glu Ser Trp Asn Gly Ser Tyr Leu Tyr  
 50 55 60  
 Pro Asp Pro Cys Gly Trp Thr Pro Ile Gln Gly Val Thr Cys Asp Ile  
 65 70 75 80  
 Tyr Asp Glu Leu Trp Tyr Val Thr Ala Leu Ser Phe Gly Thr Met Lys  
 85 90 95  
 Asp Asn Ser Leu Ala Cys Ser Glu Ser Pro Val Ile Arg Pro Gln Leu  
 100 105 110  
 Phe Glu Leu Lys His Leu Lys Ser Leu Ser Leu Phe Asn Cys Phe Thr  
 115 120 125  
 Thr Pro Asn Arg Tyr Leu Ala Ser Ile Ser Asp Glu Lys Trp Leu Asp  
 130 135 140  
 Leu Ser Lys Ser Leu Glu Arg Leu Glu Ile Arg Ser Asn Pro Gly Leu  
 145 150 155 160  
 Ile Gly Glu Leu Pro Ser Val Ile Thr Asn Leu Thr Asn Leu Gln Ser  
 165 170 175  
 Leu Val Val Leu Glu Asn Lys Leu Thr Gly Pro Leu Pro Val Asn Leu  
 180 185 190  
 Ala Lys Leu Thr Arg Leu Arg Arg Leu Val Leu Ser Gly Asn Arg Phe  
 195 200 205  
 Thr Gly Arg Ile Pro Glu Val Tyr Gly Leu Thr Gly Leu Leu Ile Leu  
 210 215 220  
 Asp Val Ser Arg Asn Phe Leu Ser Gly Ala Leu Pro Leu Ser Val Gly  
 225 230 235 240  
 Gly Leu Tyr Ser Leu Leu Lys Leu Asp Leu Ser Asn Asn Tyr Leu Glu  
 245 250 255  
 Gly Lys Leu Pro Arg Glu Leu Glu Ser Leu Lys Asn Leu Thr Leu Leu  
 260 265 270

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Asp Leu Arg Asn Asn Arg Leu Ser Gly Gly Leu Ser Lys Glu Ile Gln  
275 280 285

Glu Met Thr Ser Leu Val Glu Leu Val Leu Ser Asn Asn Arg Leu Ala  
290 295 300

Gly Asp Leu Thr Gly Ile Lys Trp Arg Asn Leu Lys Asn Leu Val Val  
305 310 315 320

Leu Asp Leu Ser Asn Thr Gly Leu Lys Gly Glu Ile Pro Gly Ser Ile  
325 330 335

Leu Glu Leu Lys Lys Leu Arg Phe Leu Gly Leu Ser Asn Asn Leu  
340 345 350

Gly Gly Lys Leu Ile Pro Gln Met Glu Thr Glu Met Pro Ser Leu Ser  
355 360 365

Ala Leu Tyr Val Asn Gly Asn Asn Ile Ser Gly Glu Leu Glu Phe Ser  
370 375 380

Arg Tyr Phe Tyr Glu Arg Met Gly Arg Arg Leu Gly Val Trp Gly Asn  
385 390 395 400

Pro Asn Leu Cys Tyr Asn Gly Asp Glu Thr Lys Asn Leu Ser Asp His  
405 410 415

Val Pro Phe Gly Val Asn Gln Cys Lys Arg Ile Lys Ala Asp Lys Tyr  
420 425 430

<210> 2705

<211> 876

<212> DNA

<213> Arabidopsis thaliana

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gtcatagctg agtttgtagc aacacttctg ttctctacg tctcaatcct gactgtaatc 180  
ggctacaaag ctcaaaccga tgcaaccgcc ggaggagtgg attgtggcgg cgtaggaata 240  
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ctagccgatg	gctacaacaa	aggtaccgga	ctcggtgccg	agatcattgg	aacttttgtc	540
cttgatata	ccgtcttctc	ggcaaccgat	cccaagcgaa	atgctcgtga	ctctcacgtg	600
ccagttttgg	ctccacttcc	cattggcttt	gccgtcttca	tggttcattt	agccaccatt	660
cccatcaccg	gaaccgggat	caaccggct	cgtagctttg	gagctgccgt	tatttacaac	720
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gcagcagcgt	tttaccatca	gtttatttta	agagcggctg	cgattaaagc	tcttggctca	840
tttggctcct	ttggctcctt	taggagcttt	gcttaa			876

&lt;210&gt; 2706

&lt;211&gt; 291

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2706

Met	Ala	Lys	Asp	Leu	Asp	Val	Asn	Glu	Ser	Gly	Pro	Pro	Ala	Ala	Arg
1				5					10					15	

Asp	Tyr	Lys	Asp	Pro	Pro	Pro	Ala	Pro	Phe	Phe	Asp	Met	Glu	Glu	Leu
			20					25					30		

Arg	Lys	Trp	Pro	Leu	Tyr	Arg	Ala	Val	Ile	Ala	Glu	Phe	Val	Ala	Thr
		35					40					45			

Leu	Leu	Phe	Leu	Tyr	Val	Ser	Ile	Leu	Thr	Val	Ile	Gly	Tyr	Lys	Ala
	50					55					60				

Gln	Thr	Asp	Ala	Thr	Ala	Gly	Gly	Val	Asp	Cys	Gly	Gly	Val	Gly	Ile
65					70					75					80

Leu	Gly	Ile	Ala	Trp	Ala	Phe	Gly	Gly	Met	Ile	Phe	Val	Leu	Val	Tyr
				85					90				95		

Cys	Thr	Ala	Gly	Ile	Ser	Gly	Gly	His	Ile	Asn	Pro	Ala	Val	Thr	Val
			100					105					110		

Gly	Leu	Phe	Leu	Ala	Arg	Lys	Val	Ser	Leu	Val	Arg	Thr	Val	Leu	Tyr
		115					120								

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Ile Val Ala Gln Cys Leu Gly Ala Ile Cys Gly Cys Gly Phe Val Lys  
130 135 140

Ala Phe Gln Ser Ser Tyr Tyr Thr Arg Tyr Gly Gly Gly Ala Asn Glu  
145 150 155 160

Leu Ala Asp Gly Tyr Asn Lys Gly Thr Gly Leu Gly Ala Glu Ile Ile  
165 170 175

Gly Thr Phe Val Leu Val Tyr Thr Val Phe Ser Ala Thr Asp Pro Lys  
180 185 190

Arg Asn Ala Arg Asp Ser His Val Pro Val Leu Ala Pro Leu Pro Ile  
195 200 205

Gly Phe Ala Val Phe Met Val His Leu Ala Thr Ile Pro Ile Thr Gly  
210 215 220

Thr Gly Ile Asn Pro Ala Arg Ser Phe Gly Ala Ala Val Ile Tyr Asn  
225 230 235 240

Asn Glu Lys Ala Trp Asp Asp Gln Trp Ile Phe Trp Val Gly Pro Met  
245 250 255

Ile Gly Ala Ala Ala Ala Ala Phe Tyr His Gln Phe Ile Leu Arg Ala  
260 265 270

Ala Ala Ile Lys Ala Leu Gly Ser Phe Gly Ser Phe Gly Ser Phe Arg  
275 280 285

Ser Phe Ala  
290

<210> 2707

<211> 693

<212> DNA

<213> Arabidopsis thaliana

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cagagaaccg gacttgtgat cagggtcag cagaacgtgt cagtaccaga aagtagtcgc 180  
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## 047-E2F-PCT.ST25.txt

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atacaacat tgtaaccaac agaagctgca gctagagcca aagattctgc taaagagatc 420
atcaacgtta agtcatttat cgacaaaaa gcttgccct atgttcagaa cgtatccgt 480
ttaagagcat cgtacctccg ttacgatctc aacaccgtta tctccgctaa gcctaaggaa 540
gagaagcaaa gccttaaaaga tctcaccgca aagcttttcc aaaccattga caactggac 600
tatgcggcga gatcaaaag tagcccagat gctgagaagt attactcaga aactgtctcg 660
agtttgaaca atgttcttgc caagctcggg taa 693

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&lt;210&gt; 2708

&lt;211&gt; 230

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2708

```

Met Ala Gln Ala Val Thr Ser Met Ala Gly Leu Arg Gly Ala Ser Gln
1 5 10 15

```

```

Ala Val Leu Glu Gly Ser Leu Gln Ile Asn Gly Ser Asn Arg Leu Asn
20 25 30

```

```

Ile Ser Arg Val Ser Val Gly Ser Gln Arg Thr Gly Leu Val Ile Arg
35 40 45

```

```

Ala Gln Gln Asn Val Ser Val Pro Glu Ser Ser Arg Arg Ser Val Ile
50 55 60

```

```

Gly Leu Val Ala Ala Gly Leu Ala Gly Gly Ser Phe Val Lys Ala Val
65 70 75 80

```

```

Phe Ala Glu Ala Ile Pro Ile Lys Val Gly Gly Pro Pro Leu Pro Ser
85 90 95

```

```

Gly Gly Leu Pro Gly Thr Asp Asn Ser Asp Gln Ala Arg Asp Phe Ser
100 105 110

```

```

Leu Ala Leu Lys Asp Arg Phe Tyr Ile Gln Pro Leu Ser Pro Thr Glu
115 120 125

```

```

Ala Ala Ala Arg Ala Lys Asp Ser Ala Lys Glu Ile Ile Asn Val Lys
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```

130

135

140

Ser Phe Ile Asp Lys Lys Ala Trp Pro Tyr Val Gln Asn Asp Leu Arg  
145 150 160

Leu Arg Ala Ser Tyr Leu Arg Tyr Asp Leu Asn Thr Val Ile Ser Ala  
165 170 175

Lys Pro Lys Glu Lys Gln Ser Leu Lys Asp Leu Thr Ala Lys Leu  
180 185 190

Phe Gln Thr Ile Asp Asn Leu Asp Tyr Ala Ala Arg Ser Lys Ser Ser  
195 200 205

Pro Asp Ala Glu Lys Tyr Tyr Ser Glu Thr Val Ser Ser Leu Asn Asn  
210 215 220

Val Leu Ala Lys Leu Gly  
225 230

&lt;210&gt; 2709

&lt;211&gt; 1509

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2709

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aagaagatta aacacttgaa atggaatctt cctccaagcc ctccaaagt tccggatcatc 120  
ggaaatttac accagattgg agaattgcct cacagggtcac ttcaacatct cgccgaaaga 180  
tacggacctg tgatgcttct tcaactttggg ttgtgccctg taactgtggg ctcatcaaga 240  
gaagcagctg aagaagtgtc cagaactcat gacctagact gttgcagcag gcctaaactt 300  
gtcgggacaa ggttactctc gcggaatttt aaagatgtct gttttacgcc atacggtaac 360  
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gcggttaatc gctctccggt cgatttgagc aaatcacttt tctggctaac cgctagtatc 540  
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gttaaaaacc cgaacttat aaagaaagt caaggcgaga tccgagaaca acttggcagc 1020
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gttcagtga 1509

```

&lt;210&gt; 2710

&lt;211&gt; 502

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2710

```

Met Ala Ile Ser Phe Leu Cys Phe Cys Leu Ile Thr Leu Ala Ser Leu
1 5 10 15

```

```

Ile Phe Phe Ala Lys Lys Ile Lys His Leu Lys Trp Asn Leu Pro Pro
20 25 30

```

```

Ser Pro Pro Lys Phe Pro Val Ile Gly Asn Leu His Gln Ile Gly Glu
35 40 45

```

```

Leu Pro His Arg Ser Leu Gln His Leu Ala Glu Arg Tyr Gly Pro Val
50 55 60

```

```

Met Leu Leu His Phe Gly Phe Val Pro Val Thr Val Val Ser Ser Arg
65 70 75 80

```

```

Glu Ala Ala Glu Glu Val Leu Arg Thr His Asp Leu Asp Cys Cys Ser
85 90 95

```

## 047-E2F-PCT.ST25.txt

Arg Pro Lys Leu Val Gly Thr Arg Leu Leu Ser Arg Asn Phe Lys Asp  
 100 105 110  
 Val Cys Phe Thr Pro Tyr Gly Asn Glu Trp Lys Ala Arg Arg Lys Phe  
 115 120  
 Ala Leu Arg Glu Leu Phe Cys Leu Lys Lys Val Gln Ser Phe Arg His  
 130 135 140  
 Ile Arg Glu Glu Glu Cys Asn Phe Leu Val Lys Gln Leu Ser Glu Ser  
 145 150 155 160  
 Ala Val Asn Arg Ser Pro Val Asp Leu Ser Lys Ser Leu Phe Trp Leu  
 165 170 175  
 Thr Ala Ser Ile Phe Phe Arg Val Ala Leu Gly Gln Asn Phe His Glu  
 180 185 190  
 Ser Asn Phe Ile Asp Lys Glu Lys Ile Glu Glu Leu Val Phe Glu Ala  
 195 200 205  
 Glu Thr Ala Leu Ala Ser Phe Thr Cys Ser Asp Phe Phe Pro Val Ala  
 210 215 220  
 Gly Leu Gly Trp Leu Val Asp Trp Phe Ser Gly Gln His Lys Arg Leu  
 225 230 235 240  
 Asn Asp Val Phe Tyr Lys Leu Asp Ala Leu Phe Gln His Val Ile Asp  
 245 250 255  
 Asp His Leu Asn Pro Gly Arg Ser Lys Glu His Glu Asp Ile Ile Asp  
 260 265 270  
 Ser Met Leu Asp Ala Ile His Lys Glu Gly Lys Asp Ser Ser Leu Glu  
 275 280 285  
 Leu Ile Ile Asp His Ile Lys Gly Phe Leu Ala Asn Ile Phe Leu Ala  
 290 295 300  
 Gly Ile Asp Thr Gly Ala Leu Thr Met Ile Trp Ala Met Thr Glu Leu  
 305 310 315 320  
 Val Lys Asn Pro Lys Leu Ile Lys Lys Val Gln Gly Glu Ile Arg Glu  
 325 330 335  
 Gln Leu Gly Ser Asn Lys Ala Arg Ile Thr Glu Glu Asp Ile Asp Lys  
 340 345 350

Val Pro Tyr Leu Lys Met Val Ile Lys Glu Thr Phe Arg Leu His Pro  
 355 360 365

Ala Ala Pro Leu Ile Leu Pro Arg Glu Thr Met Ala His Ile Lys Val  
 370 375 380

Gln Gly Tyr Asp Ile Pro Pro Lys Arg Arg Ile Leu Val Asn Val Ser  
 385 390 395 400

Ala Ile Gly Arg Asp Pro Lys Leu Trp Thr Asn Pro Glu Glu Phe Asp  
 405 410 415

Pro Glu Arg Phe Met Asp Ser Ser Val Asp Tyr Arg Gly Gln His Tyr  
 420 425 430

Glu Leu Leu Pro Phe Gly Ser Gly Arg Arg Ile Cys Pro Gly Met Pro  
 435 440 445

Met Gly Ile Ala Ala Val Glu Leu Gly Leu Leu Asn Leu Leu Tyr Phe  
 450 455 460

Phe Asp Trp Lys Leu Pro Asp Gly Met Thr His Lys Asp Ile Asp Thr  
 465 470 475 480

Glu Glu Ala Gly Thr Leu Thr Ile Val Lys Lys Val Pro Leu Gln Leu  
 485 490 495

Val Pro Val Arg Val Gln  
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<210> 2711

<211> 243

<212> DNA

<213> Arabidopsis thaliana

<400> 2711  
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 ttcaaaccga agaacaacac tcgtgcgata actcctccag atagctacat cgagtttatg 180  
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 taa 243

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<210> 2712

<211> 80

<212> PRT

<213> Arabidopsis thaliana

<400> 2712

Met Gly Asn Lys Ala Thr Thr Val Lys Glu Glu Arg Glu Glu Ile His  
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Leu Lys Ile Val Pro Pro Leu Asp Lys Val Phe Leu Arg Trp Leu Ala  
20 25 30

Arg Asp Leu Gln Arg Val His Gly Phe Lys Pro Lys Asn Asn Thr Arg  
35 40 45

Ala Ile Thr Pro Pro Asp Ser Tyr Ile Glu Phe Met Arg Leu Asn Gly  
50 55 60

Ser Leu Asp Val Asp Leu Asp Asp Pro Asp Leu Ala His Leu Phe Lys  
65 70 75 80

<210> 2713

<211> 1440

<212> DNA

<213> Arabidopsis thaliana

<400> 2713

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cgagtaactc ctcaacctgg agttccacct gaagaagcag gggctgcggt agctgctgaa	180
tcttctactg gtacatggac aactgtgtgg accgatgggc ttaccagcct tgatcgttac	240
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gtagcttatc ccttagacct ttttgaagaa ggttcgggta ctaacatggt tacctcgatt	360
gtgggtaatg tatttgggtt caaagccctg gctgctctac gtctagagga tctcgaatc	420
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047-E2F-PCT.ST25.txt

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<210> 2714

<211> 479

<212> PRT

<213> *Arabidopsis thaliana*

<400> 2714

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Val	Lys	Glu	Tyr	Lys	Leu	Thr	Tyr	Tyr	Thr	Pro	Glu	Tyr	Glu	Thr	Lys
		20					25						30		

Asp	Thr	Asp	Ile	Leu	Ala	Ala	Phe	Arg	Val	Thr	Pro	Gln	Pro	Gly	Val
		35					40					45			

Pro	Pro	Glu	Glu	Ala	Gly	Ala	Ala	Val	Ala	Ala	Glu	Ser	Ser	Thr	Gly
	50				55						60				

Thr	Trp	Thr	Thr	Val	Trp	Thr	Asp	Gly	Leu	Thr	Ser	Leu	Asp	Arg	Tyr
65					70				75					80	

Lys	Gly	Arg	Cys	Tyr	His	Ile	Glu	Pro	Val	Pro	Gly	Glu	Glu	Thr	Gln
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Phe Ile Ala Tyr Val Ala Tyr Pro Leu Asp Leu Phe Glu Glu Gly Ser  
 100 105 110  
 Val Thr Asn Met Phe Thr Ser Ile Val Gly Asn Val Phe Gly Phe Lys  
 115 120 125  
 Ala Leu Ala Ala Leu Arg Leu Glu Asp Leu Arg Ile Pro Pro Ala Tyr  
 130 135 140  
 Thr Lys Thr Phe Gln Gly Pro Pro His Gly Ile Gln Val Glu Arg Asp  
 145 150 155 160  
 Lys Leu Asn Lys Tyr Gly Arg Pro Leu Leu Gly Cys Thr Ile Lys Pro  
 165 170 175  
 Lys Leu Gly Leu Ser Ala Lys Asn Tyr Gly Arg Ala Val Tyr Glu Cys  
 180 185 190  
 Leu Arg Gly Gly Leu Asp Phe Thr Lys Asp Asp Glu Asn Val Asn Ser  
 195 200 205  
 Gln Pro Phe Met Arg Trp Arg Asp Arg Phe Leu Phe Cys Ala Glu Ala  
 210 215 220  
 Ile Tyr Lys Ser Gln Ala Glu Thr Gly Glu Ile Lys Gly His Tyr Leu  
 225 230 235 240  
 Asn Ala Thr Ala Gly Thr Cys Glu Glu Met Ile Lys Arg Ala Val Phe  
 245 250 255  
 Ala Arg Glu Leu Gly Val Pro Ile Val Met His Asp Tyr Leu Thr Gly  
 260 265 270  
 Gly Phe Thr Ala Asn Thr Ser Leu Ser His Tyr Cys Arg Asp Asn Gly  
 275 280 285  
 Leu Leu Leu His Ile His Arg Ala Met His Ala Val Ile Asp Arg Gln  
 290 295 300  
 Lys Asn His Gly Met His Phe Arg Val Leu Ala Lys Ala Leu Arg Leu  
 305 310 315 320  
 Ser Gly Gly Asp His Ile His Ala Gly Thr Val Val Gly Lys Leu Glu  
 325 330 335



Gly Asp Arg Glu Ser Thr Leu Gly Phe Val Asp Leu Arg Asp Asp  
 340 345 350

Tyr Val Glu Lys Asp Arg Ser Arg Gly Ile Phe Phe Thr Gln Asp Trp  
 355 360 365

Val Ser Leu Pro Gly Val Leu Pro Val Ala Ser Gly Gly Ile His Val  
 370 375 380

Trp His Met Pro Ala Leu Thr Glu Ile Phe Gly Asp Asp Ser Val Leu  
 385 390 395 400

Gln Phe Gly Gly Gly Thr Leu Gly His Pro Trp Gly Asn Ala Pro Gly  
 405 410 415

Ala Val Ala Asn Arg Val Ala Leu Glu Ala Cys Val Gln Ala Arg Asn  
 420 425 430

Glu Gly Arg Asp Leu Ala Val Glu Gly Asn Glu Ile Ile Arg Glu Ala  
 435 440 445

Cys Lys Trp Ser Pro Glu Leu Ala Ala Cys Glu Val Trp Lys Glu  
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<210> 2715

<211> 201

<212> DNA

<213> Arabidopsis thaliana

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 aacacccta gtcgattgga attgagaaaa ttctgtccct attgttataa acatacaatt 180  
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<210> 2716

<211> 66

<212> PRT

<213> Arabidopsis thaliana

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20 25 30Tyr Ile Thr Gln Lys Asn Arg His Asn Thr Pro Ser Arg Leu Glu Leu  
35 40 45Arg Lys Phe Cys Pro Tyr Cys Tyr Lys His Thr Ile His Gly Glu Ile  
50 55 60Lys Lys  
65

&lt;210&gt; 2717

&lt;211&gt; 117

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

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&lt;210&gt; 2718

&lt;211&gt; 38

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2718

Met Thr Gln Ser Asn Pro Asn Glu Gln Ser Val Glu Leu Asn Arg Thr  
1 5 10 15Ser Leu Tyr Trp Gly Leu Leu Leu Ile Phe Val Leu Ala Val Leu Phe  
20 25 30Ser Asn Tyr Phe Phe Asn  
35

&lt;210&gt; 2719

&lt;211&gt; 825

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2719

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caagtgaaat ccaatccagc aaataatttg atctgtgggc agcatcattg tggtaaagg	120
cgtaatgccca gaggaataat taccgcaagg catagagggg gaggtcataa gcgtctatac	180
cgtaaaaatag attttcgacg aaatgcaaaa gacatatatg gtagaatcgt aaccatagaa	240
tacgacccta atcgaaatgc atacatttgt ctcatacct atggggatgg tgagaagaga	300
tatatattac atcccagagg ggcataatt ggagatacca ttgtttctgg tacagaagtt	360
cctataaaaa tgggaaatgc cctaccttg accgatatgc ccttaggcac ggccatacat	420
aatatagaaa tcacacttgg aaggggtgga caattagcta gagcagcggg tgctgtagcg	480
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gtagttatga accctgtcga ccatcccat ggaggtggtg aaggaggggc tccaattggt	720
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&lt;210&gt; 2720

&lt;211&gt; 274

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2720

Met Ala Ile His	Leu Tyr Lys Thr Ser	Thr Pro Ser Thr Arg	Asn Gly
1	5	10	15

Ala Val Asp Ser	Gln Val Lys Ser	Asn Pro Arg Asn Asn	Leu Ile Cys
20	25	30	

Gly Gln His His Cys Gly Lys Gly Arg	Asn Ala Arg Gly Ile Ile Thr
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35

40

45

Ala Arg His Arg Gly Gly Gly His Lys Arg Leu Tyr Arg Lys Ile Asp  
 50 55 60  
 Phe Arg Arg Asn Ala Lys Asp Ile Tyr Gly Arg Ile Val Thr Ile Glu  
 65 70 75  
 Tyr Asp Pro Asn Arg Asn Ala Tyr Ile Cys Leu Ile His Tyr Gly Asp  
 85 90 95  
 Gly Glu Lys Arg Tyr Ile Leu His Pro Arg Gly Ala Ile Ile Gly Asp  
 100 105 110  
 Thr Ile Val Ser Gly Thr Glu Val Pro Ile Lys Met Gly Asn Ala Leu  
 115 120 125  
 Pro Leu Thr Asp Met Pro Leu Gly Thr Ala Ile His Asn Ile Glu Ile  
 130 135 140  
 Thr Leu Gly Arg Gly Gly Gln Leu Ala Arg Ala Ala Gly Ala Val Ala  
 145 150 155 160  
 Lys Leu Ile Ala Lys Glu Gly Lys Ser Ala Thr Leu Lys Leu Pro Ser  
 165 170 175  
 Gly Glu Val Arg Leu Ile Ser Lys Asn Cys Ser Ala Thr Val Gly Gln  
 180 185 190  
 Val Gly Asn Val Gly Val Asn Gln Lys Ser Leu Gly Arg Ala Gly Ser  
 195 200 205  
 Lys Cys Trp Leu Gly Lys Arg Pro Val Val Arg Gly Val Val Met Asn  
 210 215 220  
 Pro Val Asp His Pro His Gly Gly Gly Glu Gly Arg Ala Pro Ile Gly  
 225 230 235 240  
 Arg Lys Lys Pro Val Thr Pro Trp Gly Tyr Pro Ala Leu Gly Arg Arg  
 245 250 255  
 Thr Arg Lys Arg Lys Lys Tyr Ser Glu Thr Leu Ile Leu Arg Arg Arg  
 260 265 270  
 Ser Lys

&lt;210&gt; 2721

&lt;211&gt; 591

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2721

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accgaaatct cgaatcaact tattagtctt atgatataatc tcagtataga aaaggataacc    180
aaagatcttt atttgtttat aaactctcct ggtggatggg taatatctgg aatggctatt    240
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&lt;210&gt; 2722

&lt;211&gt; 196

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2722

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Met Pro Ile Gly Val Pro Lys Val Pro Phe Arg Ser Pro Gly Glu Gly
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Asp Thr Ser Trp Val Asp Ile Tyr Asn Arg Leu Tyr Arg Glu Arg Leu
      20          25          30
Phe Phe Leu Gly Gln Glu Val Asp Thr Glu Ile Ser Asn Gln Leu Ile
      35          40          45
Ser Leu Met Ile Tyr Leu Ser Ile Glu Lys Asp Thr Lys Asp Leu Tyr
      50          55          60
Leu Phe Ile Asn Ser Pro Gly Gly Trp Val Ile Ser Gly Met Ala Ile
65           70           75          80

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Tyr Asp Thr Met Gln Phe Val Arg Pro Asp Val Gln Thr Ile Cys Met  
85 90 95

Gly Leu Ala Ala Ser Ile Ala Ser Phe Ile Leu Val Gly Gly Ala Ile  
100 105 110

Thr Lys Arg Ile Ala Phe Pro His Ala Arg Val Met Ile His Gln Pro  
115 120 125

Ala Ser Ser Phe Tyr Glu Ala Gln Thr Gly Glu Phe Ile Leu Glu Ala  
130 135 140

Glu Glu Leu Leu Lys Leu Arg Glu Thr Ile Thr Arg Val Tyr Val Gln  
145 150 155 160

Arg Thr Gly Lys Pro Ile Trp Val Ile Ser Glu Asp Met Glu Arg Asp  
165 170 175

Val Phe Met Ser Ala Thr Glu Ala Gln Ala His Gly Ile Val Asp Leu  
180 185 190

Val Ala Val Gln  
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<210> 2723

<211> 648

<212> DNA

<213> Arabidopsis thaliana

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cttacttgtt ttttagtaca agtagctacg ggatttgcta tgacttttta ttaccgtcca 180  
accgttactg aagcttttgc ttctgttcaa tatataatga ctgaagctaa ctttggttgg 240  
ttaatccgat cagttcatcg atggtcggca agtatgatgg tcctaagtat gatcctgcac 300  
gtatttcctg tatacctcac cgggtggttt aaaaaacctc gcgaattaac ttgggttact 360  
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gatcaaatg gttattgggc ggtcaaaatt gtaacagggt tacctgacgc tattccggta 480  
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648

&lt;210&gt; 2724

&lt;211&gt; 215

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2724

Met Ser Lys Val Tyr Asp Trp Phe Glu Glu Arg Leu Glu Ile Gln Ala  
1 5 10 15Ile Ala Asp Asp Ile Thr Ser Lys Tyr Val Pro Pro His Val Asn Ile  
20 25 30Phe Tyr Cys Leu Gly Gly Ile Thr Leu Thr Cys Phe Leu Val Gln Val  
35 40 45Ala Thr Gly Phe Ala Met Thr Phe Tyr Tyr Arg Pro Thr Val Thr Glu  
50 55 60Ala Phe Ala Ser Val Gln Tyr Ile Met Thr Glu Ala Asn Phe Gly Trp  
65 70 75 80Leu Ile Arg Ser Val His Arg Trp Ser Ala Ser Met Met Val Leu Met  
85 90 95Met Ile Leu His Val Phe Arg Val Tyr Leu Thr Gly Gly Phe Lys Lys  
100 105 110Pro Arg Glu Leu Thr Trp Val Thr Gly Val Val Leu Gly Val Leu Thr  
115 120 125Ala Ser Phe Gly Val Thr Gly Tyr Ser Leu Pro Trp Asp Gln Ile Gly  
130 135 140Tyr Trp Ala Val Lys Ile Val Thr Gly Val Pro Asp Ala Ile Pro Val  
145 150 155 160Ile Gly Ser Pro Leu Val Glu Leu Leu Arg Gly Ser Ala Ser Val Gly  
165 170 175Gln Ser Thr Leu Thr Arg Phe Tyr Ser Leu His Thr Phe Val Leu Pro  
180 185 190

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Leu Leu Thr Ala Val Phe Met Leu Met His Phe Leu Met Ile Arg Lys  
195 200 205

Gln Gly Ile Ser Gly Pro Leu  
210 215

<210> 2725

<211> 399

<212> DNA

<213> Arabidopsis thaliana

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gccacagctg ttgatatagg tattttgaaa atacgccctg ctaaccaatg gtaacgatg 180  
gctctgatgg gcgggtttgc tagaataggc aataatgaaa tcactatttt agtaaatgat 240  
gcagagaaga atagtgcacat tgatccacaa gaagctcagc aaactcttga aatagcagaa 300  
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<210> 2726

<211> 132

<212> PRT

<213> Arabidopsis thaliana

<400> 2726

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Ser Glu Val Lys Glu Ile Ile Leu Ser Thr Asn Ser Gly Gln Ile Gly  
20 25 30

Val Leu Ala Asn His Ala Pro Ile Ala Thr Ala Val Asp Ile Gly Ile  
35 40 45

Leu Lys Ile Arg Leu Ala Asn Gln Trp Leu Thr Met Ala Leu Met Gly  
50 55 60



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Gly Phe Ala Arg Ile Gly Asn Asn Glu Ile Thr Ile Leu Val Asn Asp  
65 70 75 80

Ala Glu Lys Asn Ser Asp Ile Asp Pro Gln Glu Ala Gln Gln Thr Leu  
85 90 95

Glu Ile Ala Glu Ala Asn Leu Arg Lys Ala Glu Gly Lys Arg Gln Thr  
100 105 110

Ile Glu Ala Asn Leu Ala Leu Arg Arg Ala Arg Thr Arg Val Glu Ala  
115 120 125

Leu Asn Thr Ile  
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<210> 2727

<211> 324

<212> DNA

<213> Arabidopsis thaliana

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tctgaaagcg tccttccttc tcaatgcccg ggcattccatc caatgcattc ttttcgatct 180  
tgtactcagg gtacactgaa caccacaaaa atatcgatga aactaactat aagtgattgc 240  
ggattcgaac cgctcacaga aggatttaca gtctctgcact ctaccagagc tactacctgt 300  
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<210> 2728

<211> 107

<212> PRT

<213> Arabidopsis thaliana

<400> 2728

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Thr Glu Leu Gly Tyr Gly Phe Pro Ile Gly Asp Pro Trp Ile Thr Asp  
20 25 30

047-E2F-PCT.ST25.txt

Gly Ile Ser Pro Trp Pro Phe Ala Ser Glu Ser Val Leu Pro Ser Gln  
35 40 45

Cys Pro Gly Ile His Pro Met His Ser Phe Arg Ser Cys Thr Gln Gly  
50 55 60

Thr Leu Asn Thr Thr Lys Ile Ser Met Lys Leu Thr Ile Ser Asp Cys  
65 70 75 80

Gly Phe Glu Pro Leu Thr Glu Gly Phe Thr Val Leu His Ser Thr Arg  
85 90 95

Ala Thr Thr Cys Tyr His Phe Leu Phe Asn Ser  
100 105

<210> 2729

<211> 573

<212> DNA

<213> Arabidopsis thaliana

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aaaaggactt gcgttgattg cggaaactatc cgaactcctc ttggcgctgg tggtcctgcc 180  
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aacctcgacc atcgaaacgc caagaaatac aaaatcaaca tagttgatga tggcaagatc 360  
gacatcgatg atgatccgaa aatttgcaat aacaagcgta gtagtagtag tagcagtaac 420  
aaaggagtga gtaagttttt ggatttaggg tttaaagtac cggtgatgaa gagatcagcg 480  
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<210> 2730

<211> 190

<212> PRT

<213> Arabidopsis thaliana

&lt;400&gt; 2730

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 20 25 30  
 Gly Gly Ser Ser Ser Gly Asp Thr Lys Arg Thr Cys Val Asp Cys Gly  
 35 40 45  
 Thr Ile Arg Thr Pro Leu Trp Arg Gly Gly Pro Ala Gly Pro Lys Ser  
 50 55 60  
 Leu Cys Asn Ala Cys Gly Ile Lys Ser Arg Lys Lys Arg Gln Ala Ala  
 65 70 75 80  
 Leu Gly Met Arg Ser Glu Glu Lys Lys Lys Asn Arg Lys Ser Asn Cys  
 85 90 95  
 Asn Asn Asp Leu Asn Leu Asp His Arg Asn Ala Lys Lys Tyr Lys Ile  
 100 105 110  
 Asn Ile Val Asp Asp Gly Lys Ile Asp Ile Asp Asp Asp Pro Lys Ile  
 115 120 125  
 Cys Asn Asn Lys Arg Ser Ser Ser Ser Ser Asn Lys Gly Val Ser  
 130 135 140  
 Lys Phe Leu Asp Leu Gly Phe Lys Val Pro Val Met Lys Arg Ser Ala  
 145 150 155 160  
 Val Glu Lys Lys Arg Leu Trp Arg Lys Leu Gly Glu Glu Glu Arg Ala  
 165 170 175  
 Ala Val Leu Leu Met Ala Leu Ser Cys Ser Ser Val Tyr Ala  
 180 185 190

&lt;210&gt; 2731

&lt;211&gt; 828

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2731

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60

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 aaaacctgtc agaccgccgt gcgaccaccc cagcaaggta gaaccgaacc gagtaacgat 660  
 cctctacagc accgaatgcg tccgaggacg atcgtagccg tcaatcacgc tctagccgca 720  
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<210> 2732

<211> 275

<212> PRT

<213> Arabidopsis thaliana

<400> 2732

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 20 25 30

Gln Pro Gly Phe Arg Ala Cys Leu Leu Arg Asn Gln Gly Asn Arg Asp  
 35 40 45

Leu Thr Ser Leu Ser Asp Cys Ile Ala Ala Arg Cys Asp Ser Leu Leu  
 50 55 60

Leu Gly Lys Ser His Ile Ile Asn Leu Ser Lys Asn Arg Arg Met Pro  
 65 70 75 80

Phe Lys Ser Arg Glu Asn Thr Ile Phe Phe Ser Lys Arg Arg Lys Asn  
 85 90 95

Ser Ser Leu Cys Pro His Cys Thr Ala Pro Pro Phe Gln Leu Ser Pro  
 100 105 110

Thr Met Leu Leu Met Phe Cys His Asp Gly Ala Arg Leu Lys Gly Met  
 115 120 125

Asn Pro Arg Asn Ala Glu Glu Arg Lys Tyr Arg Gln Ala Glu Gly Leu  
 130 135 140

Val Thr Pro Gln Phe Leu Ser Ile Pro Gly Ser Pro Ile Asp Leu Thr  
 145 150 155 160

Lys Cys Trp Ser Ser Leu Leu Asn Ile Gln Gly Cys Lys Ile Glu Ile  
 165 170 175

Phe Lys Ser Val Phe Lys Trp Asn Val Leu Leu Ser Thr Gln Pro Leu  
 180 185 190

Leu His Thr Asn Glu Ser Asn Tyr Lys Thr Cys Gln Thr Ala Val Arg  
 195 200 205

Pro Pro Gln Gln Gly Arg Thr Glu Pro Ser Asn Asp Pro Leu Gln His  
 210 215 220

Arg Met Arg Pro Arg Thr Ile Val Ala Val Asn His Ala Leu Ala Ala  
 225 230 235 240

Arg Ser Trp Phe Ile Asn Gln Gly Glu Asp Gly Ala Ser Asp Gly Gly  
 245 250 255

Asn Glu Asn Asp Glu Asp Val Gly Met Leu Arg Asp Gly Gly Tyr Val  
 260 265 270

Ile Val Ser  
 275

<210> 2733

<211> 1119

<212> DNA

<213> Arabidopsis thaliana

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&lt;210&gt; 2734

&lt;211&gt; 372

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2734

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Leu Gly Val Pro Arg Leu Val Phe His Gly Thr Ser Phe Phe Ser Leu
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Cys Cys Ser Tyr Asn Met Arg Ile His Lys Pro His Lys Lys Val Ala
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047-E2F-PCT.ST25.txt

Thr Ser Ser Thr Pro Phe Val Ile Pro Gly Leu Pro Gly Asp Ile Val  
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Ile Thr Glu Asp Gln Ala Asn Val Ala Lys Glu Glu Thr Pro Met Gly  
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Lys Phe Met Lys Glu Val Arg Glu Ser Glu Thr Asn Ser Phe Gly Val  
100 105 110

Leu Val Asn Ser Phe Tyr Glu Leu Glu Ser Ala Tyr Ala Asp Phe Tyr  
115 120 125

Arg Ser Phe Val Ala Lys Arg Ala Trp His Ile Gly Pro Leu Ser Leu  
130 135 140

Ser Asn Arg Glu Leu Gly Glu Lys Ala Arg Arg Gly Lys Lys Ala Asn  
145 150 155 160

Ile Asp Glu Gln Glu Cys Leu Lys Trp Leu Asp Ser Lys Thr Pro Gly  
165 170 175

Ser Val Val Tyr Leu Ser Phe Gly Ser Gly Thr Asn Phe Thr Asn Asp  
180 185 190

Gln Leu Leu Glu Ile Ala Phe Gly Leu Glu Gly Ser Gly Gln Ser Phe  
195 200 205

Ile Trp Val Val Arg Lys Asn Glu Asn Gln Gly Asp Asn Glu Glu Trp  
210 215 220

Leu Pro Glu Gly Phe Lys Glu Arg Thr Thr Gly Lys Gly Leu Ile Ile  
225 230 235 240

Pro Gly Trp Ala Pro Gln Val Leu Ile Leu Asp His Lys Ala Ile Gly  
245 250 255

Gly Phe Val Thr His Cys Gly Trp Asn Ser Ala Ile Glu Gly Ile Ala  
260 265 270

Ala Gly Leu Pro Met Val Thr Trp Pro Met Gly Ala Glu Gln Phe Tyr  
275 280 285

Asn Glu Lys Leu Leu Thr Lys Val Leu Arg Ile Gly Val Asn Val Gly  
290 295 300

Ala Thr Glu Leu Val Lys Lys Gly Lys Leu Ile Ser Arg Ala Gln Val  
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047-E2F-PCT.ST25.txt

Glu Lys Ala Val Arg Glu Val Ile Gly Gly Glu Lys Ala Glu Arg  
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Arg Leu Trp Ala Lys Lys Leu Gly Glu Met Ala Lys Ala Val Glu  
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Asn Gly Arg Lys  
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<211> 2409

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<213> Arabidopsis thaliana

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 acggagatgt tcccgtgtaa cgtcgcaaga gctacaacca ccgacgttat atccgggtgg 1260  
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<210> 2736

<211> 802

<212> PRT

<213> Arabidopsis thaliana

<400> 2736

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047-E2F-PCT.ST25.txt

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Thr Asn Val Leu Pro Gly Gly Ala Met Ala Gln Ala Ala Ala Ala  
35 40 45

Ser Leu Phe Ser Pro Pro Leu Thr Lys Ser Val Tyr Ala Ser Ser Gly  
50 55 60

Leu Ser Leu Ala Leu Glu Gln Pro Glu Arg Gly Thr Asn Arg Gly Glu  
65 70 75 80

Ala Ser Met Arg Asn Asn Asn Val Gly Gly Gly Gly Asp Thr Phe  
85 90 95

Asp Gly Ser Val Asn Arg Arg Ser Arg Glu Glu Glu His Glu Ser Arg  
100 105 110

Ser Gly Ser Asp Asn Val Glu Gly Ile Ser Gly Glu Asp Gln Asp Ala  
115 120 125

Ala Asp Lys Pro Pro Arg Lys Lys Arg Tyr His Arg His Thr Pro Gln  
130 135 140

Gln Ile Gln Glu Leu Glu Ser Met Phe Lys Glu Cys Pro His Pro Asp  
145 150 155 160

Glu Lys Gln Arg Leu Glu Leu Ser Lys Arg Leu Cys Leu Glu Thr Arg  
165 170 175

Gln Val Lys Phe Trp Phe Gln Asn Arg Arg Thr Gln Met Lys Thr Gln  
180 185 190

Leu Glu Arg His Glu Asn Ala Leu Leu Arg Gln Glu Asn Asp Lys Leu  
195 200 205

Arg Ala Glu Asn Met Ser Ile Arg Glu Ala Met Arg Asn Pro Ile Cys  
210 215 220

Thr Asn Cys Gly Gly Pro Ala Met Leu Gly Asp Val Ser Leu Glu Glu  
225 230 235 240

His His Leu Arg Ile Glu Asn Ala Arg Leu Lys Asp Glu Leu Asp Arg  
245 250 255

Val Cys Asn Leu Thr Gly Lys Phe Leu Gly His His His Asn His His  
260 265 270

047-E2F-PCT.ST25.txt

Tyr Asn Ser Ser Leu Glu Leu Ala Val Gly Thr Asn Asn Asn Gly Gly  
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 His Phe Ala Phe Pro Pro Asp Phe Gly Gly Gly Gly Gly Cys Leu Pro  
 290 295 300  
 Pro Gln Gln Gln Gln Ser Thr Val Ile Asn Gly Ile Asp Gln Lys Ser  
 305 310 315 320  
 Val Leu Leu Glu Leu Ala Leu Thr Ala Met Asp Glu Leu Val Lys Leu  
 325 330 335  
 Ala Gln Ser Glu Glu Pro Leu Trp Val Lys Ser Leu Asp Gly Glu Arg  
 340 345 350  
 Asp Glu Leu Asn Gln Asp Glu Tyr Met Arg Thr Phe Ser Ser Thr Lys  
 355 360 365  
 Pro Thr Gly Leu Ala Thr Glu Ala Ser Arg Thr Ser Gly Met Val Ile  
 370 375 380  
 Ile Asn Ser Leu Ala Leu Val Glu Thr Leu Met Asp Ser Asn Arg Trp  
 385 390 395 400  
 Thr Glu Met Phe Pro Cys Asn Val Ala Arg Ala Thr Thr Thr Asp Val  
 405 410 415  
 Ile Ser Gly Gly Met Ala Gly Thr Ile Asn Gly Ala Leu Gln Leu Met  
 420 425 430  
 Asn Ala Glu Leu Gln Val Leu Ser Pro Leu Val Pro Val Arg Asn Val  
 435 440 445  
 Asn Phe Leu Arg Phe Cys Lys Gln His Ala Glu Gly Val Trp Ala Val  
 450 455 460  
 Val Asp Val Ser Ile Asp Pro Val Arg Glu Asn Ser Gly Gly Ala Pro  
 465 470 475 480  
 Val Ile Arg Arg Leu Pro Ser Gly Cys Val Val Gln Asp Val Ser Asn  
 485 490 495  
 Gly Tyr Ser Lys Val Thr Trp Val Glu His Ala Glu Tyr Asp Glu Asn  
 500 505 510  
 Gln Ile His Gln Leu Tyr Arg Pro Leu Leu Arg Ser Gly Leu Gly Phe  
 Page 3797

515  
 520 047-E2F-PCT.ST25.txt  
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Gly Ser Gln Arg Trp Leu Ala Thr Leu Gln Arg Gln Cys Glu Cys Leu  
 530 535 540

Ala Ile Leu Ile Ser Ser Ser Val Thr Ser His Asp Asn Thr Ser Ile  
 545 550 555

Thr Pro Gly Gly Arg Lys Ser Met Leu Lys Leu Ala Gln Arg Met Thr  
 565 570 575

Phe Asn Phe Cys Ser Gly Ile Ser Ala Pro Ser Val His Asn Trp Ser  
 580 585 590

Lys Leu Thr Val Gly Asn Val Asp Pro Asp Val Arg Val Met Thr Arg  
 595 600 605

Lys Ser Val Asp Asp Pro Gly Glu Pro Pro Gly Ile Val Leu Ser Ala  
 610 615 620

Ala Thr Ser Val Trp Leu Pro Ala Ala Pro Gln Arg Leu Tyr Asp Phe  
 625 630 635 640

Leu Arg Asn Glu Arg Met Arg Cys Glu Trp Asp Ile Leu Ser Asn Gly  
 645 650 655

Gly Pro Met Gln Glu Met Ala His Ile Thr Lys Gly Gln Asp Gln Gly  
 660 665 670

Val Ser Leu Leu Arg Ser Asn Ala Met Asn Ala Asn Gln Ser Ser Met  
 675 680 685

Leu Ile Leu Gln Glu Thr Cys Ile Asp Ala Ser Gly Ala Leu Val Val  
 690 695 700

Tyr Ala Pro Val Asp Ile Pro Ala Met His Val Val Met Asn Gly Gly  
 705 710 715 720

Asp Ser Ser Tyr Val Ala Leu Leu Pro Ser Gly Phe Ala Val Leu Pro  
 725 730 735

Asp Gly Gly Ile Asp Gly Gly Gly Ser Gly Asp Gly Asp Gln Arg Pro  
 740 745 750

Val Gly Gly Gly Ser Leu Leu Thr Val Ala Phe Gln Ile Leu Val Asn  
 755 760 765

Asn Leu Pro Thr Ala Lys Leu Thr Val Glu Ser Val Glu Thr Val Asn  
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<210> 2737

<211> 1506

<212> DNA

<213> *Arabidopsis thaliana*

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&lt;210&gt; 2738

&lt;211&gt; 501

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2738

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Met Leu Leu Gln Asn Phe Ser Asn Thr Ile Phe Leu Leu Cys Leu Phe
1      5      10

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Phe Thr Leu Leu Ser Ala Thr Lys Pro Leu Asn Leu Thr Leu Pro His
20      25      30

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Gln His Pro Ser Pro Asp Ser Val Ala Leu His Val Ile Arg Ser Val
35      40      45

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```

Asn Glu Ser Leu Ala Arg Arg Gln Leu Ser Ser Pro Ser Ser Ser Ser
50      55      60

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Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Cys Arg Thr Gly Asn Pro
65      70      75      80

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Ile Asp Asp Cys Trp Arg Cys Ser Asp Ala Asp Trp Ser Thr Asn Arg
85      90      95

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```

Gln Arg Leu Ala Asp Cys Ser Ile Gly Phe Gly His Gly Thr Leu Gly
100     105     110

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Gly Lys Asn Gly Lys Ile Tyr Val Val Thr Asp Ser Ser Asp Asn Asn
115     120     125

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Pro Thr Asn Pro Thr Pro Gly Thr Leu Arg Tyr Gly Val Ile Gln Glu
130     135     140

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Glu Pro Leu Trp Ile Val Phe Ser Ser Asn Met Leu Ile Arg Leu Lys
145     150     155     160

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047-E2F-PCT.ST25.txt

Gln Glu Leu Ile Ile Asn Ser Tyr Lys Thr Leu Asp Gly Arg Gly Ser  
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Ala Val His Ile Thr Gly Asn Gly Cys Leu Thr Leu Gln Tyr Val Gln  
180 185 190

His Ile Ile Ile His Asn Leu His Ile Tyr Asp Cys Lys Pro Ser Ala  
195 200 205

Gly Phe Glu Lys Arg Gly Arg Ser Asp Gly Asp Gly Ile Ser Ile Phe  
210 215 220

Gly Ser Gln Lys Ile Trp Val Asp His Cys Ser Met Ser His Cys Thr  
225 230 235 240

Asp Gly Leu Ile Asp Ala Val Met Gly Ser Thr Ala Ile Thr Ile Ser  
245 250 255

Asn Asn Tyr Phe Thr His His Asp Glu Val Met Leu Leu Gly His Asp  
260 265 270

Asp Asn Tyr Ala Pro Asp Thr Gly Met Gln Val Thr Ile Ala Phe Asn  
275 280 285

His Phe Gly Gln Gly Leu Val Gln Arg Met Pro Arg Cys Arg Arg Gly  
290 295 300

Tyr Ile His Val Val Asn Asn Asp Phe Thr Glu Trp Lys Met Tyr Ala  
305 310 315 320

Ile Gly Gly Ser Gly Asn Pro Thr Ile Asn Ser Gln Gly Asn Arg Tyr  
325 330 335

Ser Ala Pro Ser Asp Pro Ser Ala Lys Glu Val Thr Lys Arg Val Asp  
340 345 350

Ser Lys Asp Asp Gly Glu Trp Ser Asn Trp Asn Trp Arg Thr Glu Gly  
355 360 365

Asp Leu Met Glu Asn Gly Ala Phe Phe Val Ala Ser Gly Glu Gly Met  
370 375 380

Ser Ser Met Tyr Ser Lys Ala Ser Ser Val Asp Pro Lys Ala Ala Ser  
385 390 395 400

Leu Val Asp Gln Leu Thr Arg Asn Ala Gly Val Phe Gly Gly Pro Arg  
3801

Asp Asp Gln Gly Gln Ser Gly Asn Ser Tyr Ser Pro Tyr Gly Gly Asp  
 420 425 430

Gly Gly Gly Gly Gly Ser Ser Gly Gly Ser Ser Gly Gly Gly Met Asp  
 435 440 445

Val Met Gly Gly Thr Thr Arg Gly Ser Ser Ser Ser Ser Gly Asp Asp  
 450 455 460

Ser Asn Val Phe Gln Met Ile Phe Gly Ser Asp Ala Pro Ser Arg Pro  
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<211> 1686

<212> DNA

<213> Arabidopsis thaliana

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047-E2F-PCT.ST25.txt

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<211> 561

<212> PRT

<213> Arabidopsis thaliana

<400> 2740

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35 40 45

Leu His Leu Asp Glu Ser Asp Ser Leu Leu Glu Asp Ala Leu Ser Ser  
50 55 60

Gly Arg Ala Ser Tyr His Cys Val Asp Val Arg Asp Lys Pro Gln Ile  
Page 3803

65                      70                      75                      80  
 Val Lys Val Thr Glu Gly Ser Tyr Val Val Phe Tyr Met Gly Ala Thr  
                                  85                                   90                                   95  
 Asp Leu Arg Ser His Asp Tyr Phe Asp Cys Tyr Lys Val Ile Val Gln  
                                  100                                   105                                   110  
 Gly Thr Arg Asn Val Ile Ser Ala Cys Arg Glu Ser Gly Val Arg Lys  
                                  115                                   120                                   125  
 Leu Ile Tyr Asn Ser Thr Ala Asp Val Val Phe Asp Gly Ser Gln Pro  
                                  130                                   135                                   140  
 Ile Arg Asp Gly Asp Glu Ser Leu Arg Arg Pro Leu Lys Phe Gln Ser  
                                  145                                   150                                   155                                   160  
 Met Leu Thr Asp Phe Lys Ala Gln Ala Glu Ala Leu Ile Lys Leu Ala  
                                  165                                   170                                   175  
 Asn Asn Arg Asp Gly Leu Leu Thr Cys Ala Leu Arg Ser Ser Ile Val  
                                  180                                   185                                   190  
 Phe Gly Pro Gly Asp Thr Glu Phe Val Pro Phe Leu Val Asn Leu Ala  
                                  195                                   200                                   205  
 Lys Ser Gly Tyr Ala Lys Phe Ile Leu Gly Ser Gly Glu Asn Ile Ser  
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 Asp Phe Thr Tyr Ser Glu Asn Val Ser His Ala His Ile Cys Ala Val  
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 Lys Ala Leu Asp Ser Gln Met Glu Phe Val Ala Gly Lys Glu Phe Phe  
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 Ile Thr Asn Leu Lys Pro Val Arg Phe Trp Asp Phe Val Ser His Ile  
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 Val Glu Gly Leu Gly Tyr Pro Arg Pro Ser Ile Lys Leu Pro Val Arg  
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 Gly Leu Gly Ser Asn Tyr Asp Thr Ala His Gln Tyr Ala Leu Leu Ala  
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 Arg Phe Glu Ile Ser Glu Ser Ala Val Arg Asp Leu Ser Ser Asp Ile  
 450 455 460  
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 Gly Gly Asp Trp Ile Lys Phe Phe Lys Ile Ala Gly Ser Leu Tyr Leu  
 485 490 495  
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 Met Ser Phe Ser Phe Thr Gly Phe Phe Ile Tyr Glu Gln Tyr Glu Leu  
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&lt;211&gt; 1647

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

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<213> Arabidopsis thaliana

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Asp Lys Ser Ser Ala Thr Tyr Thr Ser Phe Ile Gly Cys Ser Asp Arg  
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Ser Met Leu Ser Ile Met Ala Ser Lys Ile Ser Tyr Glu Ser Lys Pro  
145 150 155 160

Tyr Ile Thr Ser Val Val Lys Asn Thr Trp Lys Met Asp Leu Val Gly  
165 170 175

Asn Tyr Asp Phe Tyr Asn Ala Phe Gln Glu Ser Lys Leu Thr Gln Ala  
Page 3807

Phe Val Phe Lys Thr Ser Ser Thr Asn Pro Asp Leu Ile Val Val Ser  
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 Arg Asp Lys Leu Gly Arg Asn Lys Asn Leu Lys Tyr Ile Leu Thr Gly  
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 Tyr Lys His Tyr Gly Pro Cys Asn Ser Phe Asn Ser Leu Tyr Lys Gly  
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<212> DNA

<213> Arabidopsis thaliana

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 35 40 45

Ile Phe Ile Cys Ser Arg Val Tyr Val Trp Val Asn Asp Cys Gly Ile  
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Val Val Gln Ile Pro Ile Ile Gly  
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&lt;211&gt; 1917

&lt;212&gt; DNA

<213> *Arabidopsis thaliana*

&lt;400&gt; 2745

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<213> Arabidopsis thaliana

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 35 40 45

Met Arg Pro Thr Gln Ile Arg Thr His Ala Ile Arg Lys Ala His Glu  
 50 55 60

Asn Ile Asp Arg Thr Leu Lys Ala Ala Glu Val Ile Leu Ser Gln Phe  
 65 70 75 80

Asp Leu Leu Arg Gln Ala Glu Thr Lys Val Leu Lys Gly Pro His Glu  
 85 90 95

Asp Leu Glu Ser Tyr Leu Asp Ala Ile Ala Gln Leu Arg Lys Ile Ile  
 100 105 110

Arg Tyr Phe Met Ser Asn Lys Ser Phe Lys Ser Ser Asp Gly Val Leu  
 115 120 125

Asn His Ala Asn Ser Leu Leu Ala Lys Ala Gln Ser Lys Leu Glu Glu  
 130 135 140

Glu Phe Lys Gln Leu Leu Ala Ser Tyr Ser Lys Ala Val Glu Pro Asp  
 Page 3811

145                      150                      155                      160  
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 Asp Gly Gly Gly Lys Pro His Gly Gly His His Asn Asp Asp Ala Glu  
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 Thr Ala Ala Tyr Thr Leu Pro Ile Leu Ile Pro Ser Arg Val Leu Pro  
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 Gln Leu Leu Gln Ile Tyr Arg Asp Thr Arg Ser Phe Val Leu Glu Glu  
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 Ser Leu Lys Lys Leu Gly Val Glu Lys Leu Ser Lys Glu Asp Val Gln  
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 Arg Met Gln Trp Glu Val Leu Glu Ala Lys Ile Gly Asn Trp Ile His  
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 Cys Asp Gln Ile Phe Arg Gly Phe Asp Ser Leu Ser Asp Gln Cys Phe  
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 Asp Met Tyr Glu Ile Met Arg Glu Leu His Thr Glu Ile Glu Thr Ile  
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Arg Glu Ser Leu Arg Leu Ala Val Ala Glu Val Leu Leu Pro Ala Tyr  
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Arg Ser Phe Leu Lys Arg Phe Gly Pro Leu Val Glu Ser Gly Lys Asn  
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<211> 3414

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<213> *Arabidopsis thaliana*

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&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

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Asp Glu Glu Lys Phe Lys Asp Thr Val His Arg Leu Glu Lys Glu Ser  
20 25 30

Gly Phe Phe Phe Asn Met Arg Tyr Phe Glu Asp Ser Val Thr Ala Gly  
35 40 45

Glu Trp Asp Asp Val Glu Lys Tyr Leu Ser Gly Phe Thr Lys Val Asp  
50 55 60

Asp Asn Arg Tyr Ser Met Lys Ile Phe Phe Glu Ile Arg Lys Gln Lys  
65 70 75 80

Tyr Leu Glu Ala Leu Asp Lys Lys Asp His Ala Lys Ala Val Asp Ile  
85 90 95

Leu Val Lys Glu Leu Lys Val Phe Ser Thr Phe Asn Glu Glu Leu Phe  
100 105 110

Lys Glu Ile Thr Met Leu Leu Thr Leu Thr Asn Phe Arg Glu Asn Glu  
115 120 125

Gln Leu Ser Lys Tyr Gly Asp Thr Lys Ser Ala Arg Gly Ile Met Leu  
130 135 140

Gly Glu Leu Lys Lys Leu Ile Glu Ala Asn Pro Leu Phe Arg Asp Lys  
145 150 155 160

Leu Gln Phe Pro Ser Leu Lys Asn Ser Arg Leu Arg Thr Leu Ile Asn  
165 170 175

Gln Ser Leu Asn Trp Gln His Gln Leu Cys Lys Asn Pro Arg Pro Asn  
180 185 190

Pro Asp Ile Lys Thr Leu Phe Val Asp His Thr Cys Gly His Pro Asn  
195 200 205

Gly Ala His Thr Pro Ser Pro Thr Thr Asn His Leu Met Gly Ser Val  
210 215 220

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Pro Lys Val Gly Gly Phe Pro Pro Leu Gly Ala His Gly Pro Phe Gln  
 225 230 235 240

Pro Thr Pro Ala Pro Leu Thr Thr Ser Leu Ala Gly Trp Met Pro Asn  
 245 250 255

Pro Ser Val Gln His Pro Thr Val Ser Ala Gly Pro Ile Gly Leu Gly  
 260 265 270

Ala Pro Asn Ser Ala Val Ser Met Leu Lys Arg Glu Arg Pro Arg Ser  
 275 280 285

Pro Pro Thr Asn Ser Leu Ser Met Asp Tyr Gln Thr Ala Asp Ser Glu  
 290 295 300

Ser Val Leu Lys Arg Pro Arg Pro Phe Gly Ile Ser Asp Gly Val Asn  
 305 310 315 320

Asn Leu Pro Val Asn Val Leu Pro Val Thr Tyr Pro Gly Gln Ser His  
 325 330 335

Ala His Ala Thr Tyr Ser Thr Asp Asp Leu Pro Lys Asn Val Ser Arg  
 340 345 350

Ile Leu Ser Gln Gly Ser Ala Ile Lys Ser Met Asp Phe His Pro Val  
 355 360 365

Gln Gln Thr Met Leu Leu Val Gly Thr Asn Leu Gly Asp Ile Ala Ile  
 370 375 380

Trp Glu Val Gly Ser Arg Glu Lys Leu Val Ser Arg Ser Phe Lys Val  
 385 390 395 400

Trp Asp Leu Ala Thr Cys Thr Val Asn Leu Gln Ala Ser Leu Ala Ser  
 405 410 415

Glu Tyr Thr Ala Ala Val Asn Arg Val Val Trp Ser Pro Asp Gly Gly  
 420 425 430

Leu Leu Gly Val Ala Tyr Ser Lys His Ile Val His Ile Tyr Ser Tyr  
 435 440 445

His Gly Gly Glu Asp Leu Arg Asn His Leu Glu Ile Asp Ala His Ala  
 450 455 460

Gly Asn Val Asn Asp Leu Ala Phe Ser Gln Pro Asn Gln Gln Leu Cys  
 465 470 475 480 485 490 495

465                      470                      475                      480  
 Val Val Thr Cys Gly Glu Asp Lys Thr Ile Lys Val Trp Asp Ala Val  
                                  485                                   490                                   495  
 Thr Gly Asn Lys Leu His Thr Phe Glu Gly His Glu Ala Pro Val Tyr  
                                  500                                   505                                   510  
 Ser Val Cys Pro His Gln Lys Glu Asn Ile Gln Phe Ile Phe Ser Thr  
                                  515                                   520                                   525  
 Ala Val Asp Gly Lys Ile Lys Ala Trp Leu Tyr Asp Asn Met Gly Ser  
                                  530                                   535                                   540  
 Arg Val Asp Tyr Asp Ala Pro Gly Arg Ser Cys Thr Ser Met Ala Tyr  
                                  545                                   550                                   555                                   560  
 Cys Ala Asp Gly Thr Arg Leu Phe Ser Cys Gly Thr Ser Lys Glu Gly  
                                  565                                   570                                   575  
 Glu Ser Phe Ile Val Glu Trp Asn Glu Ser Glu Gly Ala Val Lys Arg  
                                  580                                   585                                   590  
 Thr Tyr Leu Gly Leu Gly Lys Arg Ser Val Gly Val Val Gln Phe Asp  
                                  595                                   600                                   605  
 Thr Met Lys Asn Lys Phe Leu Val Ala Gly Asp Glu Phe Gln Val Lys  
                                  610                                   615                                   620  
 Phe Trp Asp Met Asp Ser Val Asp Leu Leu Ser Ser Thr Ala Ala Glu  
                                  625                                   630                                   635                                   640  
 Gly Gly Leu Pro Ser Ser Pro Cys Leu Arg Ile Asn Lys Glu Gly Thr  
                                  645                                   650                                   655  
 Leu Leu Ala Val Ser Thr Thr Asp Asn Gly Ile Lys Ile Leu Ala Asn  
                                  660                                   665                                   670  
 Ala Glu Gly Ser Arg Ile Leu His Ser Met Ala Asn Arg Gly Leu Asp  
                                  675                                   680                                   685  
 Ser Ser Arg Ala Pro Pro Gly Ser Val Ala Lys Gly Pro Ile Val Gly  
                                  690                                   695                                   700  
 Thr Phe Gly Thr Pro Asn Ser Ser Thr Gly Met Ser Leu Ser Met Gly  
                                  705                                   710                                   715                                   720



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Glu Arg Ser Gly Pro Val Ala Ser Val Thr Gly Leu Asn Gly Asp Asn  
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 Arg Ser Leu Pro Asp Val Lys Pro Arg Ile Ala Asp Asp Ala Glu Lys  
 740 745 750  
 Ser Lys Thr Trp Lys Leu Thr Glu Ile Ser Glu Arg Ser Gln Leu Arg  
 755 760 765  
 Thr Leu Arg Leu Pro Asp Thr Leu Leu Pro Ala Arg Val Val Lys Leu  
 770 775 780  
 Ile Tyr Thr Asn Ser Gly Gly Ala Ile Leu Ala Leu Ala Glu Asn Ala  
 785 790 795 800  
 Ala His Lys Leu Trp Lys Trp Gln Lys Ser Glu Arg Asn Leu Leu Gly  
 805 810 815  
 Lys Ala Asn Ser Asn Val Pro Pro Gln Leu Trp Gln Pro Ser Ser Gly  
 820 825 830  
 Val Leu Met Thr Asn Asp Thr Arg Glu Gly Asn Lys Glu Asp Val Val  
 835 840 845  
 Pro Cys Phe Ala Leu Ser Lys Asn Asp Ser Tyr Val Met Ser Ala Ser  
 850 855 860  
 Gly Gly Lys Ile Ser Leu Phe Asn Met Met Thr Phe Lys Thr Met Thr  
 865 870 875 880  
 Thr Phe Met Ala Pro Pro Pro Ala Ala Thr Ser Leu Ala Phe His Pro  
 885 890 895  
 Gln Asp Asn Asn Ile Ile Ala Ile Gly Met Asp Asp Ser Ser Ile Gln  
 900 905 910  
 Ile Tyr Asn Val Arg Val Asp Glu Val Lys Ser Lys Leu Lys Gly His  
 915 920 925  
 Gln Lys Arg Val Thr Gly Leu Ala Phe Ser Asn Val Leu Asn Val Leu  
 930 935 940  
 Val Ser Ser Gly Ala Asp Ser Gln Leu Cys Val Trp Ser Met Asp Gly  
 945 950 955 960  
 Trp Glu Lys Gln Ala Ser Lys Gln Ile Gln Ile Pro Ser Gly His Ser  
 965 970 975

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Pro Asn Pro Leu Ala His Thr Arg Val Gln Phe His Gln Asp Gln Ile  
980 985 990

His Val Leu Val Val His Ala Ser Gln Leu Ala Ile Tyr Glu Ala Pro  
995 1000 1005

Lys Leu Glu Asn Met Lys Gln Trp Ile Pro Lys Glu Ser Ser Gly  
1010 1015 1020

Ser Val Thr Asp Ala Val Tyr Ser Cys Asp Ser Gln Ser Ile Tyr  
1025 1030 1035

Ala Ala Phe Asp Asp Gly Ser Val Ser Ile Leu Thr Ala Thr Thr  
1040 1045 1050

Leu Gln Leu Lys Cys Arg Ile Gly Pro Asn Ser Tyr Leu Pro Ser  
1055 1060 1065

Asn Pro Ser Ser Arg Val Tyr Pro Ala Thr Val Ala Ala His Pro  
1070 1075 1080

Ser Glu Pro Asn Gln Phe Ala Val Gly Leu Thr Asp Gly Gly Val  
1085 1090 1095

His Val Ile Glu Pro Pro Gly Pro Glu Gly Lys Trp Gly Ile Ser  
1100 1105 1110

Ala Pro Pro Glu Asn Gly Ala Gly Pro Ser Val Ser Ser Ala Pro  
1115 1120 1125

Gly Ser Asp Gln Gln Pro Ser Asp Ser  
1130 1135

<210> 2749

<211> 630

<212> DNA

<213> Arabidopsis thaliana

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ctagctcgtc ctgacaacca tgtcgaggac tctgtaggcc gtctacttcg tcttggtcaa 120  
acgtaccaca tcgtacctgc gaatccccgag acaggaggag gtattttctc gaacagtgaa 180  
gaaatctgtc ctcttgacat cttccagtca aacaatccgc ttgacttggg cctaccatc 240  
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 gctccgaact ggtttttgtg tcctaaagaa tccaaggggt ggagagttgt gtactctgaa 360  
 gaattcaaaa agagtcttat aataagcact ggtggttcac caaacccaag tggcttcag 420  
 atccatcgag tcgacggagg tgcttacaag attgtatatt gtacaacat ctcgactact 480  
 acgtgcatga acgttggcat attcaccgat atctctggtg cagcagcgtt agccttgacc 540  
 agcgatgagg ctctcctagt taagttccag aaggcagcaa ctccaaaagc tgatttgaag 600  
 actaagctga ggatgttccc ttctactga 630

&lt;210&gt; 2750

&lt;211&gt; 209

&lt;212&gt; PRT

<213> *Arabidopsis thaliana*

&lt;400&gt; 2750

Met Lys Ala Thr 5 Ile Ser Ile Thr Thr 10 Phe Leu Val Val 15 Ala Leu

Ala Ala Pro Ser 20 Leu Ala Arg Pro Asp 25 Asn His Val Glu 30 Asp Ser Val

Gly Arg Leu 35 Leu Arg Pro Gly 40 Gln Thr Tyr His Ile 45 Val Pro Ala Asn

Pro Glu Thr Gly Gly Gly 55 Ile Phe Ser Asn Ser 60 Glu Glu Ile Cys Pro

Leu Asp Ile Phe Gln 70 Ser Asn Asn Pro Leu 75 Asp Leu Gly Leu Pro 80 Ile

Lys Phe Lys Ser 85 Glu Leu Trp Phe Val 90 Lys Glu Met Asn Ser 95 Ile Thr

Ile Glu Phe Glu 100 Ala Pro Asn Trp Phe 105 Leu Cys Pro Lys Glu Ser Lys

Gly Trp Arg 115 Val Val Tyr Ser Glu 120 Glu Phe Lys Lys 125 Ser Leu Ile Ile

Ser Thr Gly Gly Ser Ser 135 Asn Pro Ser Gly Phe Gln 140 Ile His Arg Val

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Asp Gly Gly Ala Tyr Lys Ile Val Tyr Cys Thr Asn Ile Ser Thr Thr  
145 150 155 160

Thr Cys Met Asn Val Gly Ile Phe Thr Asp Ile Ser Gly Ala Arg Arg  
165 170 175

Leu Ala Leu Thr Ser Asp Glu Ala Leu Leu Val Lys Phe Gln Lys Ala  
180 185 190

Ala Thr Pro Lys Ala Asp Leu Lys Thr Lys Leu Arg Met Phe Pro Phe  
195 200 205

Tyr

<210> 2751

<211> 366

<212> DNA

<213> Arabidopsis thaliana

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gtcaaagatg ttccaaaagg gtgttttagcg atcaaagtgg gatcgcaagg agaagagcaa 120  
cagagattta tcgttcctgt ttgtatttt aaccatccat tggtcatgca gtcctgaaa 180  
gaagcagaag acgagtatgg attcgatcaa aagggcacca tcacaattcc ttgtcacgtg 240  
gaggagtttc gttacgttca agctttgata gatggagaga gatcagttta caatggtaac 300  
aaccatcatc atagacatgg tggccgtgac cagtatcatc atcttgttgg atgcttcaga 360  
gcttga 366

<210> 2752

<211> 121

<212> PRT

<213> Arabidopsis thaliana

<400> 2752

Met Gly Thr Gly Glu Lys Thr Leu Lys Ser Phe Gln Leu His Arg Lys  
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Gln Ser Val Lys Val Lys Asp Val Pro Lys Gly Cys Leu Ala Ile Lys  
 20 25 30

Val Gly Ser Gln Gly Glu Glu Gln Gln Arg Phe Ile Val Pro Val Leu  
 35 40 45

Tyr Phe Asn His Pro Leu Phe Met Gln Leu Leu Lys Glu Ala Glu Asp  
 50 55 60

Glu Tyr Gly Phe Asp Gln Lys Gly Thr Ile Thr Ile Pro Cys His Val  
 65 70 75 80

Glu Glu Phe Arg Tyr Val Gln Ala Leu Ile Asp Gly Glu Arg Ser Val  
 85 90 95

Tyr Asn Gly Asn Asn His His His Arg His Gly Gly Arg Asp Gln Tyr  
 100 105 110

His His Leu Val Gly Cys Phe Arg Ala  
 115 120

<210> 2753

<211> 339

<212> DNA

<213> Arabidopsis thaliana

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 aagagcttga cgactgttca agggcttaag aaagagtaca gctacgagag gatttcaag 180  
 gatttgaaga aagatttctg ctgcaacggt aacgttgtgc aggacaaaga actaggcaag 240  
 atcatccagc ttcaaggtga tcaaaggaag aaagtgtctc agttcttggt ccaaaactggg 300  
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<210> 2754

<211> 112

<212> PRT

<213> Arabidopsis thaliana

<400> 2754

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Met Val Glu Leu Asp Ile Gln Ile Pro Ser Ala Tyr Asp Pro Phe Ala  
1 5 10 15

Glu Ala Lys Asp Ser Asp Ala Pro Gly Ala Lys Glu Asn Ile His Ile  
20 25 30

Arg Ile Gln Gln Arg Asn Gly Lys Lys Ser Leu Thr Thr Val Gln Gly  
35 40 45

Leu Lys Lys Glu Tyr Ser Tyr Glu Arg Ile Leu Lys Asp Leu Lys Lys  
50 55 60

Asp Phe Cys Cys Asn Gly Asn Val Val Gln Asp Lys Glu Leu Gly Lys  
65 70 75 80

Ile Ile Gln Leu Gln Gly Asp Gln Arg Lys Lys Val Ser Gln Phe Leu  
85 90 95

Val Gln Thr Gly Ile Ala Lys Lys Asp Gln Ile Lys Ile His Gly Phe  
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<210> 2755

<211> 861

<212> DNA

<213> Arabidopsis thaliana

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gagatctgat tttgctatca acacggcttt tccgttgccg tgttcttgcc gttaacacga 180  
agtagttggt ggattttcca tagagagggtg gaggacgtca aacaagagac ctacagatct 240  
tcaaaggaga agagaaacca ccagatctgc aaacaacaag acacatcgga aggaaacgaa 300  
gaggacaaac gaaagacttt atacgtgagg cgaaaccagt ttggattctg cgggagagga 360  
gcggagcaac aaagagaaga caaatttca cgccggggag acatagctac accggcgcca 420  
gaagacgggt aatcttttgg agtctcgtgt atgtcgcagt gcagagtttt tactcttttt 480  
ttagtactag aataaacatt taacgttaat cattacatct aagttcataa gctactatta 540  
aaagtgcaca gccgtgcatt ggattttatt ctcttattga gtctaattat ttttgtgtat 600  
cttcatgggt ttgttttgct attactgggt aaaaacagat gatctaccaa cgatttcggt 660  
acgacgtggt ttctactga aaaaccgtat ctccgatggc gaaagatgac gatgggaatc 720

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tttcttttgc tcaccttaca cgtgtctttt ggtgatcttt ctgatccaa tcttcttcta	780
taaacgatgc attattgggc tcttcttggg catgcgtttg ttcgtagttt atttatccgt	840
gttcggctgt acttggcctt g	861

<210> 2756

<211> 64

<212> DNA

<213> Artificial sequence

<220>

<223> T7 promoter and oligo dT

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tttv	64

<210> 2757

<211> 34

<212> DNA

<213> Artificial sequence

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<223> primer 1 for E2Fa

<400> 2757	
aaaaagcagg ctgtgtcgta cgatcttctc ccgg	34

<210> 2758

<211> 33

<212> DNA

<213> Artificial sequence

<220>

<223> primer 2 for E2Fa

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agaaagctgg gtcatgtgat aggagaacca gcg	33

<210> 2759  
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<220>

<223> primer 1 for DPa

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 atagaattcg cttacatttt gaaactgatg

30

<210> 2760  
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<223> primer 2 for DPa

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30

<210> 2761  
 <211> 27  
 <212> DNA  
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<220>

<223> primer 1 for glutamine synthetase

<400> 2761  
 cagatcttgt taaccttgac atctcag

27

<210> 2762  
 <211> 25  
 <212> DNA  
 <213> Artificial sequence



&lt;220&gt;

&lt;223&gt; primer 2 for glutamine synthetase

&lt;400&gt; 2762

gggtcaaaag atacaaccac accag

25

&lt;210&gt; 2763

&lt;211&gt; 21

&lt;212&gt; DNA

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; primer 1 for glutamate synthase

&lt;400&gt; 2763

ggtttacgag ctacatggcc c

21

&lt;210&gt; 2764

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; primer 2 for glutamate synthase

&lt;400&gt; 2764

gagcaatccg ttcagcctcc

20

&lt;210&gt; 2765

&lt;211&gt; 22

&lt;212&gt; DNA

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; primer 1 for histone acetylase

&lt;400&gt; 2765

gcgtttgacc actcttgag ac

22

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 <211> 22  
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<220>  
 <223> primer 2 for histone acetylase  
 <400> 2766  
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22

<210> 2767  
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 <212> DNA  
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<220>  
 <223> primer 1 for LOB domain protein 41  
 <400> 2767  
 gttaccggct cgacttgaag atc

23

<210> 2768  
 <211> 22  
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<220>  
 <223> primer 2 for LOB domain protein 41  
 <400> 2768  
 gaatcgagg gaaagtctga cg

22

<210> 2769  
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 <212> DNA  
 <213> Artificial sequence

&lt;220&gt;

&lt;223&gt; primer 1 for isocitrate lyase

&lt;400&gt; 2769

gtgtggtttc caagctttcc tacg

24

&lt;210&gt; 2770

&lt;211&gt; 22

&lt;212&gt; DNA

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; primer 2 for isocitrate lyase

&lt;400&gt; 2770

ggtgaagga ctacgcttgg gg

22

&lt;210&gt; 2771

&lt;211&gt; 22

&lt;212&gt; DNA

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; primer 1 for nitrite reductase

&lt;400&gt; 2771

gggatcaatc ctcaggagaa gg

22

&lt;210&gt; 2772

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial sequence

&lt;220&gt;

&lt;223&gt; primer 2 for nitrite reductase

&lt;400&gt; 2772

ccgtccatct ttattagcgg catg

24

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22

<210> 2774  
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<220>  
 <223> primer 2 for actin 2  
 <400> 2774  
 accaccgatc cagacactgt ac

22

<210> 2775  
 <211> 8  
 <212> DNA  
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<220>  
 <223> E2F-like binding site  
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 wttsscscs

8

<210> 2776  
 <211> 8  
 <212> DNA  
 <213> Artificial sequence

<220>

<223> preferred binding site of E2Fa/DPa complex

<400> 2776

tttcccgc

8